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THE COUNCIL ON PHARMACY AND CHEMISTRY, PRESENT AND FUTURE *

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CHICAGO

The world war marked an epoch in the existence of the Council on Pharmacy and Chemistry as it did in all human endeavors. The information and experience which had been accumulated by the Council during its thirteen years' existence was drawn on by our government, directly or indirectly, and it also received consideration in England, France,[1] Belgium, Holland,[2] Italy,[3] Sweden and elsewhere. In the world wide readjustment that has begun, the efforts of the Council, past and present, will influence the plans of those who engage in the manufacture or sale of medicines, and, undoubtedly, will be the incentive to the establishment of similar bodies in other countries.

As secretary of the Council almost from the time of its organization in 1905,[4] and knowing the work of its members and its collaborators, I am firmly convinced that this body has deserved the endorsement and support given it by the American medical profession. I welcome this opportunity to present an outline of the Council's past activities and to speak of some of the problems of the future, because I feel assured that a knowledge of its endeavor to improve drug therapy will increase the profession's confidence in the Council and add to the number of its supporters.

THE COUNCIL'S ACTIVITIES

Organized primarily for the purpose of putting a stop to false declarations with regard to the composition of proprietary medicines, the Council's activities have broadened until its work may be characterized as "a propaganda for the rational use of drugs." The following are some of its activities:

1. *New and Nonofficial Remedies.* — This is an annual volume, issued by the Council. It describes both proprietary and unofficial nonproprietary drugs which are deemed worthy of consideration by the medical profession. To be admitted to this book, a preparation must comply with certain definite rules which stipulate, in effect, that its composition be declared, that no untrue or grossly exaggerated claims be made for it, and that it shall give promise of having therapeutic value.

With the exception of a few which are still under consideration, the Council has considered all proprietaries whose owners or accredited agents have requested that an examination of the products be made, and it has admitted to the book those which were found eligible. In addition, the Council has examined all of the more important or widely exploited proprietaries, even when no examination was requested, and it has admitted those of this group which were found eligible. Further, the Council has admitted to the book certain unofficial, nonproprietary articles which seemed to give promise of therapeutic usefulness, and it has established standards for the control of their identity and purity, and listed those brands which complied with these standards.

As most proprietary medicines are of a more or less experimental nature, they are accepted for inclusion in New and Nonofficial Remedies only for a limited time — usually a period of three years. At the expiration of the period of acceptance, each preparation is reexamined and retained only if the claims made for it and the present day knowledge of its value permit this action.

Since manufacturers give information only in regard to their own products, New and Nonofficial Remedies groups together articles of a similar character, and includes in each case a general discussion of the group for the purpose of comparison, not only with each other, but also with the established or pharmacopeial drugs which members of the group are intended to supplant.

In brief, New and Nonofficial Remedies is a book in which are described preparations that have been

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1. "New and Nonofficial Remedies" in France, Foreign News, J. A. M. A. **71**: 1331 (Oct. 19) 1918; **72**: 1783 (June 8) 1918.

2. Nederl. Tijdschr. v. Geneesk. Oct. 5, 1918, p. 1201.

3. An Italian View of the Proprietary Evil, Foreign News, J. A. M. A. **71**: 840 (Sept. 7) 1918; The Council on Pharmacy and Chemistry and the Patriotic Medical League in Italy, ibid. **71**: 918 (Sept. 14) 1918.

4. Although the Council on Pharmacy and Chemistry was established in 1905, it is likely that only a small percentage of physicians know just what the Council is, or have any conception as to its personnel and its ability to judge the available evidence for proprietary medicaments. The personnel has changed from time to time since 1905. At present its membership is: C. L. Alsberg, A.M., M.D., chief of the Bureau of Chemistry, U. S. Department of Agriculture, Washington, D. C.; R. A. Hatcher, Ph.G., M.D., professor of pharmacology, Cornell University Medical College, New York City; A. W. Hewlett, M.D., professor of medicine, Leland Stanford Junior University Medical School, San Francisco; John Howland, M.D., professor of pediatrics, Johns Hopkins University Department of Medicine, Baltimore; Reid Hunt, M.D., professor of pharmacology, Harvard University Medical School, Boston; Henry Kraemer, Ph.D., professor of pharmacognosy, University of Michigan College of Pharmacy, Ann Arbor, Mich.; W. T. Longcope, A.B., M.D., Bard Professor of the Practice of Medicine, College of Physicians and Surgeons of Columbia University, New York City; G. W. McCoy, M.D., director of the Hygienic Laboratory, United States Public Health Service, Washington, D. C.; Lafayette B. Mendel, Ph.D., Sc.D., professor of physiologic chemistry, Sheffield Scientific School, Yale University, New Haven, Conn.; F. G. Novy, M.D. Sc.D., professor of bacteriology, University of Michigan, Ann Arbor, Mich.; W. W. Palmer, B.S., M.D., associate professor of medicine, College of Physicians and Surgeons of Columbia University, New York City; L. G. Rowntree, M.D., professor of medicine, University of Minnesota Medical School, Minneapolis; Torald Sollmann, M.D., professor of pharmacology and materia medica, Medical Department, Western Reserve University, Cleveland; Julius Stieglitz, Ph.D., Sc.D., Chem.D., vice chairman of the Council, professor of chemistry, University of Chicago, Chicago; G. H. Simmons, M.D., LL.D., chairman of the Council, editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Chicago, and W. A. Puckner, Phar.D., secretary of the Council, director of the Chemical Laboratory of the American Medical Association, Chicago

accepted by the Council. The description includes facts that the physician should have. It is a book that should be in the hands of every physician who prescribes medicines, and who wishes to know the facts regarding the newest remedies. It is the only book in which he can find information relative to proprietary medicines that are worthy of his patronage. It will protect the physician who makes use of it against the wiles of the promoters of products not worthy of his patronage. It would certainly be of use to the physician when the detail man calls on him, for if he were being importuned to prescribe or use samples of something which he had not heretofore used and which he was unable to find in N. N. R., he might ask the detail man why. In the nature of things few physicians are sufficiently expert in chemistry and allied sciences to be able unerringly to discriminate between the true and the false as regards many preparations that he is asked to prescribe.

2. *The Reports of the Council on Pharmacy and Chemistry.*—A medicament may be inadmissible to New and Nonofficial Remedies for various reasons; it may be worthless or irrational, its composition may be secret or indefinite, or it may be exploited under exaggerated or unwarranted claims or in a way otherwise detrimental to the public health and scientific medicine. Of these various reasons which make an article unacceptable, the manufacturer obviously may remove all except the first, viz., worthlessness or irrationality. Consequently, a preparation which has been presented for admission is not definitely rejected until after its proprietor has been informed of the objections to his product and has failed to bring the preparation in conformity with the Council's rules. When a preparation is found definitely inadmissible to New and Nonofficial Remedies, that is, when the proprietor cannot or will not make it acceptable, the Council prepares a report for publication. These reports are sent for publication to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, and later published in the "Annual Reports of the Council on Pharmacy and Chemistry." The more important of these are also published in the book, "The Propaganda for Reform in Proprietary Medicines."

3. *Useful Drugs.*—Since the domination of proprietary medicines, which was retarding medical advance and threatening therapeutic chaos, had been made possible only by the insufficient and inefficient instruction given in medical schools in subjects having to do with drugs, the Council appointed a "Committee on Medical Teaching" to secure the cooperation of teachers in materia medica, pharmacology and related branches. This committee has endeavored to effect an improvement in these courses of instruction. One of the results of this work was the selection of a list of drugs to serve as a basis of materia medica instruction and thus insure that medical students shall be better informed with regard to the therapeutic worth of a few well established drugs, rather than, as in the past, leaving school with a smattering of knowledge about many drugs. The outcome of these efforts is the publication of "Useful Drugs," a concise but thorough and up-to-date discussion of the actions, uses and dosage of the more important drugs. The list of drugs presented in this book is now the basis of instruction in many schools; and many state examining boards are confining their materia medica questions to the drugs in the list.

4. *Epitome of the U. S. P. and N. F.*—To encourage the use of official drugs and to make available an estimate of their therapeutic value, a committee of the Council prepared an abstract of the U. S. Pharmacopeia and the National Formulary. This booklet, the "Epitome of the U. S. Pharmacopeia and National Formulary," presents those portions of these books which are of interest to physicians, and in addition, gives a concise statement of the therapeutic usefulness of the drugs and preparations described in them.

5. *Patent Law Reform.*—Some of the worst abuses connected with the exploitation of proprietary medicines have been made possible by our patent and trademark laws and the method of their interpretation and enforcement. The Council therefore appointed a committee to study these laws and the various propositions advanced for their improvement. This committee has published, from time to time, reports on various phases of our patent and trademark laws and recently summarized these reports in an address[5] sent to the commissioner of patents and the interested congressional committees. It is hoped that by means of these reports physicians will be enabled to give intelligent support to a revision of the patent and trademark laws when legislation is proposed.

6. *Therapeutic Research.*—Through its Committee on Therapeutic Research, and with the aid of funds provided by the Board of Trustees of the American Medical Association, the Council has encouraged the investigations of questions which might lead to a better understanding of the action of drugs. These investigations are brought together in the annual reports of the Therapeutic Research Committee of the Council, and are an important addition to our knowledge of drug action.

In the past, the Council has in particular encouraged the investigation of the action and therapeutic value of widely used drugs regarding which our knowledge is still unsatisfactory. These investigations have included a study of the action of strychnin in cardiac disease, a comparison of the action of absorption and excretion of iodid preparations, a study of the pharmacology of the opium alkaloids, etc. Appreciating that the available knowledge of proprietary drugs is one sided in that it comes from investigations made by interested pharmaceutical concerns or from investigations made at the instigation of these firms, the Council is planning a comprehensive study of many of the synthetic drugs that have gained some vogue during recent years.

THE FUTURE

Medical research, and efficient instruction in therapeutics and related subjects, spell a diminishing influence of commercial medicine over rational therapeutics. The fact that the present shortage of German synthetics has not handicapped seriously the practice of medicine should be a lesson to American physicians for many years to come.

On the other hand, it must be remembered that the publicity given to the reports of the Council and to other contributions toward rational therapeutics by THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, the journals of the state organizations, and a few personally owned publications, is as nothing when compared with the persistent and wide publicity given to the propaganda of the proprietary houses. While a

5. Need for Patent Law Revision, A. M. A. Council on Pharmacy and Chemistry Reports, 1917, p. 130.

report setting forth the objections to a proprietary is published but once, the firm's laudatory pronouncement goes forth again and again until the Council's report is completely overwhelmed and forgotten. Not only do manufacturers of proprietaries keep in close touch with the practicing physician by means of house organs, special "literature," or by traveling representatives, but many of the firms, through the meritorious lines of pills, tablets, tinctures, etc., which they put out, obtain and hold the good will and confidence of a large proportion of the medical profession.

Furthermore, some of these firms not only gain the confidence of the medical profession through these high grade pharmaceuticals, but certain of their proprietaries may be of distinct therapeutic value and yet fail to be acceptable for New and Nonofficial Remedies, because they do not conform with the reasonable rules of the Council. These firms do not find it profitable to force the sale of their regular nonproprietary pharmaceuticals by unwarranted claims or objectionable methods, yet they may consider it good business to market certain proprietary products by means of claims which are extravagant and without warrant, and which will lead to indiscriminate use by the profession and the public. In a word, where there is one dollar spent on behalf of rational medicine, thousands are spent for the purpose of increasing the sale of preparations which directly or indirectly are a detriment to the public health, to medicine, and to the pocketbook.

That the day of the secret nostrum of the pseudochemical company is not yet past is well illustrated by the recent introduction of an asserted arsphenamin preparation called "Syphilodol." The A. M. A. Chemical Laboratory proved one form of this asserted French discovery to be essentially a pill of mercurous iodid. Another form of syphilodol (for intravenous administration) had all the characteristics of water, and appeared devoid of any potent ingredient. Though the advertising sent out by the promoters in regard to its composition was suspiciously evasive, the *Illinois Medical Journal* published an advertisement of "Syphilodol," which, possibly by a coincidence, appeared above an appeal to "Our Readers" to use wares advertised in that journal.

While such rank deceptions as "Syphilodol" are not common, there are more subtle deceptions that are even more dangerous. Types of widely exploited remedies of today comprise so-called ethical specialties composed of well known and established drugs (with "jokers" hidden away somewhere) or preparations which have a plausibly fascinating pseudo-scientific background of radiant energy, colloidal chemistry, nonspecific protein reaction, or something of the sort. The latter class of preparations in particular appeal to physicians who are striving hard to keep pace with modern science. Exposure of their fallacies requires most careful consideration on the part of the Council.

Progress toward a rational and scientific drug therapy must continue, and, therefore, it is important that the Council on Pharmacy and Chemistry should continue to make the investigation of proprietary medicines its chief work. Investigation of a proprietary medicine, however, and a report of such investigation are of value in direct ratio only to the number of physicians who read the report, endorse it and act in accordance with its conclusions. In order that you may determine to what extent those preparations which are admitted to New and Nonofficial Remedies deserve your interest and confidence, it will be worth while briefly to outline the rules which govern the Council in the admission of articles to New and Nonofficial Remedies.

RULES GOVERNING THE ACCEPTANCE OF ARTICLES FOR N. N. R.

Composition.—Rules 1 and 2, and in a measure 5, 7, and 9, deal with the composition of articles. Rule 1 requires that the quantitative composition of an article be furnished the Council for publication. Rule 2 requires that the manufacturer furnish methods whereby the composition of products that are definite chemicals or the potent constituents of mixtures may be determined. The Council does not require that the process of manufacture of an article be declared unless this becomes necessary in order to judge its composition. Rule 5 requires that statements with regard to the origin and source of an article shall be truthful. Rule 7 requires that for the guidance of the dispenser, the amounts of poisonous ingredients of a preparation be placed on the label. Rule 9 requires that if patent rights are claimed for a product, the Council be informed on this point.

That it is not only the right but also the duty of the physician to know the composition of what he prescribes for his patients is so generally admitted that few have attempted to market preparations of avowedly secret composition. When the Council first began its work, it was common to see chemical formulas or statements of composition published which a chemist or a pharmacist was able to pronounce at a glance as impossible.[6] It was not unusual to find that the promoter published "a formula" for his preparation, rather than "the formula."[7] Today, however, a more prudent, if not more honest, course is pursued. This gives a "formula" which is correct so far as it goes, but which fails to divulge the actual composition of a preparation. When it is considered that many physicians are not any too conversant with the chemistry and pharmacy of drugs, it is not surprising that some administered the proprietary "Venarsen," regarding the composition of which they had only the vague statement that it was ". . . a comparatively nontoxic organic arsenic compound, 0.6 gm. representing 247 mg. (3¾ grains) of metallic arsenic in chemical combination . . ." in the belief that a preparation similar to that first introduced as salvarsan was being used. That "Venarsen" contained its arsenic as sodium cacodylate—a notoriously inactive state of combination—does not justify the intravenous administration of a drug of unknown composition.

While for the present it probably is not feasible to require, on the part of those who manufacture medicinal preparations, such professional training as is required of those who prescribe and those who dispense them, it certainly is not too much to require, as does Rule 2, that a manufacturer shall be able to demonstrate that his preparation has the composition claimed for it. Nor is it sufficient for him to know that the ingredients claimed as constituents were used in the manufacture. The fallacy of this method of reasoning was furnished by the physician who reported that he had personally added the required amount of mercuric iodid for a batch of "Mercol" which, never-

6. Puckner, W. A.: The Abuse of Chemical Formulas, Reports A. M. A. Chemical Laboratory **3**: 7, 1910.
7. The Formula for Glyco-Thymoline, J. A. M. A. **52**: 147 (Jan. 9) 1909.

theless, was devoid of mercury.[8] Acceptance of this rule by manufacturers will permit physicians to have a more accurate knowledge of the composition of preparations such as "Taka-Diastase"[9] and "Iodeol".[10]

A requirement similar to that of Rule 5 is contained in the Federal Food and Drugs Act and so no objection has been made to this rule which requires a truthful statement of the origin and source of articles. An illustration for the need of the rule was furnished by the one time popular "Vin Mariani"[11] which, though very French in its makeup, was found to be largely of the "made in the United States" variety of tipple.

The issuance of a patent for a medicinal product does not prove that such a product presents a discovery or that its owner is entitled to a temporary monopoly, yet it is only fair to physicians and to other manufacturers that notice of such patent claims be given. Hence, the Council publishes in New and Nonofficial Remedies the information bearing on this point.

Lay Advertising.—Rules 3 and 4 provide against the recognition of articles that are advertised to the public directly or indirectly, exempting from this requirement preparations which the Council believes are safe to be so advertised.

It has been held with some justice that certain shotgun proprietaries are purchased by the public with as much circumspection as they are ordered by those physicians who are addicted to the prescribing of them; but even the exploiters of these mixtures have not denied that the use of medicines by the public on its own initiative is surrounded with many objections. Hence the practice of self medication should not be encouraged by prescribing or using those preparations advertised for public use.

The only objection to the rule has come from a firm which markets a brand of liquid petrolatum, the Standard Oil Company of Indiana. The Council has considered the question of exempting simple laxatives from the restrictions of Rules 3 and 4 as it has exempted antiseptics and nonmedicinal foods. The conclusion was, however, that the excessive use of a simple laxative like a liquid petrolatum, when promoted by newspaper exploitation, is likely to be detrimental to health by overuse as well as by misuse.

The indirect advertisement to the public, which Rule 4 provides against, has been the means of inducing the extensive lay use of "Antikamnia," "Bromidia" and "Fellows' Syrup." Naturally Rule 4 has been bitterly opposed by most proprietary firms. Arguing that many physicians dispense their own drugs, pharmaceutical firms have insisted that every medicinal preparation should bear on its label, not only the dose of the preparation, but also a statement of the diseases in which the article is indicated. Whether manufacturers anticipated the profession's resentment toward the claim that physicians determine the treatment and perhaps the diagnosis by means of the statements on labels, or because the Shirley amendment to the Food and Drugs Act makes the proprietor responsible for therapeutic claims on the label of a medicine, it is a fact that fewer preparations than formerly need to be refused for infringement on this rule. In fact, some thoroughly objectionable proprietaries make a show of being "ethical" by omitting all therapeutic discussion from the labels of their preparations.

Therapeutic Claims.—Rule 6 makes ineligible for New and Nonofficial Remedies any articles regarding which the manufacturer or his agents make unwarranted, exaggerated or misleading statements as to the therapeutic value. Recognizing the long established custom of therapeutic exaggeration, it has been most difficult to determine the degree of conservatism which might with fairness be required of a manufacturer. In view of the common acceptance of individual impressions as dependable evidence, it is often almost embarrassing to declare as incompetent the statement of some well meaning and all-too-kind-hearted doctor. However, as the pitfalls of haphazard clinical trials become better known and the physician's mistrust of glowing accounts of marvelous cures more outspoken, the manufacturers' claims will be more moderate.

Nomenclature.—Were it possible to enact and enforce a law which would oblige manufacturers to sell their medicinal products under properly descriptive names and which would make it illegal for a physician to prescribe it unless he understood the meaning of such properly descriptive titles, then the Council might safely disband. In that case, physicians would discontinue the use of most proprietary preparations in favor of established drugs, and successful newcomers might each year be counted on the fingers of one hand. Such a rational nomenclature is not to be thought of, at least in our generation. Rule 8 requires that the name of an article shall not be misleading, that it shall not be therapeutically suggestive, and that established drugs shall not be disguised by fanciful titles. It recognizes the right of discoverers of new drugs to name their discoveries, and interposes no objection to arbitrary names for such products so long as such names are not misleading or do not suggest the therapeutic uses of the products. As the rule provides against the recognition of coined names for established nonproprietary drugs, so it requires that mixtures of drugs shall bear names descriptive of their composition. It would be a long step forward if physicians would recognize more fully the objections to the many proprietaries which have, as their only point of originality, a nondescriptive name for an old drug or a mixture of well known drugs. It is an encouraging sign that the Federal Trade Commission, when issuing licenses for the manufacture of synthetic drugs introduced under German patents, stipulated that all manufacturers authorized to make a given drug should use the same name for it.

Irrational Articles.—Rule 10 provides against the recognition of an article which, because of its composition, is useless or inimical to the best interests of the public and medical profession. This rule excludes medicaments which (1) are unessential modifications of established articles, or (2) are of no therapeutic value or (3) are irrational. With regard to the recognition of mixtures or compounds containing two or more active ingredients, the Council requires that the manufacturer establish the rationality of its combination. The rule has prevented the recognition of many unnecessary so-called ethical specialties. Though a mass of testimonials was often to be had for them, these contained no evidence that the mixture was

8. Hunt, Reid, and Seidell, Atherton: Howell's Mercol, J. A. M. A. **52**: 225 (Jan. 16) 1909. Howell's Mercol Again: Another Analysis Fails to Reveal the Presence of Mercury, J. A. M. A. **52**: 1595 (May 15) 1909.

9. Taka-Diastase and Liquid Taka-Diastase: Report of the Council on Pharmacy and Chemistry, J. A. M. A. **59**: 50 (July 6) 1912.

10. Iodeol and Iodagol: Report of the Council on Pharmacy and Chemistry, J. A. M. A. **69**: 1725 (Nov. 17) 1917.

11. Vin Mariani: Official Report of Council on Pharmacy and Chemistry—With Comments, J. A. M. A. **47**: 1751 (Nov. 24) 1906.

superior to its potent ingredient, or that its therapeutic effect had been determined. That there is a healthy tendency to use single drugs for their definite action and to discard combinations (be they shotgun proprietaries or "mixed" vaccines) is perhaps best illustrated by the fact that at the last revision of the U. S. Pharmacopeia a considerable number of complex antiquities were omitted from that book.

Feeling confident that this meets with the endorsement of the profession, the Council is examining more critically the evidence for the value of pharmaceutical mixtures.

STONE IN THE COMMON DUCT

WITH ANALYSIS OF FIFTY CASES *

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Probably in no other branch of abdominal surgery have greater advances been made than in that directed toward the relief of symptoms arising from the presence of biliary calculi. How successful are the measures undertaken for this purpose has been experienced by all of us who have seen symptoms of a most distressing nature relieved by surgical intervention and patients restored to a life of usefulness and comfort, when the future seemed to promise only invalidism and suffering. Unfortunately, however, this brilliant success does not always crown our efforts, and some of us, at least, can recall instances in which one, two, or even three operations on the same patient have failed to effect a permanent cure; or, still more unfortunately, our patient has succumbed soon after the primary operation.

There is no question that true recurrences of calculi do occur; that is, new stones are formed or descend from higher levels; but most of the "recurrences," so-called, are, in reality, due to calculi having been overlooked at the time of the primary operation. In this paper, I wish to discuss a condition that is of the utmost importance in the surgery of the biliary passages, both because it is responsible for a considerable number of these pseudorecurrences and also because to it must be charged the deaths of a large proportion of our patients who succumb following operative procedures. This condition is stone in the common duct.

Calculi are present in the ductus choledochus, either alone or associated with the presence of calculi elsewhere, in a comparatively large number of patients operated on for the relief of gallstone symptoms; the figures varying from as low as 4 per cent. in the older reports to as high as 20 per cent. in the more recent compilations. To what are we to attribute the discrepancies seen in the figures of different operators concerning the relative frequency of common duct stones? It seems to me that at least three explanations may be advanced: First, the more skilled and experienced surgeon will detect calculi in this location when their presence would not be revealed to a less skilled operator; second, patients who suffer from recurrences, as well as those with the severe symptoms generally associated with common duct calculi, seek aid from surgeons of wide reputation, so that the clinics of such men will show a larger proportion of common duct cases; and, third, some authors may include in their series cases of cholecystitis without stone, which, of course, would serve to reduce the proportion of common duct cases. It is an interesting fact that reports based on postmortem investigations do not give the extremely high figures of some surgeons. This is because the surgeon sees patients with symptoms, while many who at necropsy show the presence of biliary calculi have never given a history suggestive of their presence, and these "silent" stones are not so often in the common duct.

The total number of gallbladder operations performed in my practice and in association with my late colleague, Dr. George Ben Johnston, is 620. Of this number, 512 showed the presence of calculi somewhere in the biliary passages, while there were 108 instances of cholecystitis without calculi. Stones were found in the common or hepatic duct in fifty cases, representing approximately 10 per cent. of the total number of patients with calculi.

There are certain features connected with these common duct cases that afford me satisfaction when I recall them, but candor compels me to state that there are other features, the recollection of which does not cause similar gratification. I believe that a discussion of the latter points, which meant suffering or even death to our patients, will be more valuable in saving us from future errors than would be a recounting of such successes as we have experienced in the surgery of the biliary passages.

Reference to our figures will show that in fourteen of our common duct cases the patients had previously been operated on. In four instances the presence of stones in the common duct was discovered at the time of the primary operation, but in view of the serious condition of these patients it did not seem wise to perform choledochotomy at that time. In five of the remaining ten, stones in the common duct had not been even suspected, either from the patients' history or from palpation of the duct.

We can quiet the voice of conscience by saying that some of these are instances of recurrence; but the probabilities are that in the majority of these five cases, the common duct calculi were present at the time of the primary operation, though their presence was not discovered.

How is this source of error to be eliminated? No matter how skilful a surgeon may be, a certain number of common duct stones will not be palpated; for the last or retroduodenal portion of the duct, particularly where it passes through the head of the pancreas, is at times difficult to palpate, and, according to Robson, this is the part of the duct in which lie the greater number of common duct calculi.

Unquestionably, exploration of the duct will serve to reveal some stones that otherwise would have been overlooked. When, however, is this procedure to be employed? If the classical symptoms of common duct stones are present, such as chills, fever and icterus, or if the duct is enlarged and thick-walled, or if many small calculi are present in the gallbladder or cystic duct, or if there is an atrophied gallbladder, exploration of the common duct is unquestionably a justifiable course; but in my experience, in cases such as these, palpation usually suffices to demonstrate the presence of the common duct calculus. I believe that the majority of surgeons will agree in the opinion that routine

* Read before the Southern Surgical and Gynecological Association, Baltimore, Dec. 18, 1918.

opening of the common duct in all patients with gallstones is not justifiable; yet I am convinced that unless this is done, a certain number of common duct stones will be overlooked and remain to cause subsequent symptoms. All of us can recall cases in which none of the classical symptoms of common duct stone were present, and yet operation revealed the presence of one or many calculi in that location.

In view of the reported simplicity of the operation and, according to the literature, the ease and certainty with which a choledochotomy enables us to drag all common duct calculi from their lurking places, it is with some humiliation that I confess that I have, apparently, failed to detect common duct calculi in certain cases, even after opening the duct. Of our fourteen instances of secondary operation in which common duct calculi were detected, in five of the patients, stone or stones had previously been removed from the duct. Again, it may be asserted that these are instances of reformation or descent of calculi; but I am inclined to think that in some cases, at least, the stones were present at the time the duct was first opened, but were overlooked.

To summarize, it appears that:

1. Stones are present in the common duct in a considerable number of patients suffering from cholelithiasis.

2. A certain number of patients with stone in the common duct do not present symptoms sufficiently suggestive to justify exploration of the duct, and in some of these cases, palpation will fail to disclose the presence of the stone.

3. Even exploration of the duct sometimes fails to reveal the presence of calculi, though the previous and subsequent history of these patients may indicate or prove that stones were actually present.

The mortality in common duct cases subjected to operation is variously given at from 6 to 16 per cent. In our series, five patients died, giving a mortality of 10 per cent. In the series of gallbladder cases, exclusive of those showing calculi in the common duct, the mortality was about 2 per cent. Hence it is evident that the operative risk is more than fourfold as great in gallbladder cases. The obvious lesson is that in cholelithiasis cases operation should be performed early before the entrance or formation of the calculus in the common duct, and we are again reminded that cholelithiasis is essentially a surgical problem, and that medical temporizing is fraught with peril to the patients.

REPORT OF CASES

CASE 1.—A white man, aged 42, gave a history of having suffered from pain in the epigastrium for several years. Five weeks before his admission to the hospital he had a severe attack of pain in the right hypochondrium followed by jaundice. The jaundice had steadily increased and was as intense as that following cancer of the head of the pancreas. Abdominal examination disclosed a large, smooth tumor in the region of the gallbladder. Operation revealed a large, distended gallbladder containing bile and some blood. Bleeding was profuse from the skin wound, abdominal wound and through the tube from the gallbladder. We were unable to control hemorrhage, and the patient died forty-eight hours afterward. Postmortem examination revealed three large gallstones packed one on the other in the pelvis of the gallbladder and cystic duct, the lower one partly extruding from the cystic duct and completely blocking the common duct.

In the light of the postmortem findings, I feel satisfied that if this patient had been operated on a few days after the onset of his symptoms, he might have been saved. The mechanical block was so great that it never could have been overcome by nature.

CASE 2.—A white woman, aged 42, had suffered previous attacks of pain in the epigastrium, with slight jaundice. The present illness commenced four weeks before admission to hospital with an attack of pain, jaundice, chills and fever. On admission, jaundice still persisted. Operation was delayed a few days in the hope of improvement in the patient's condition, but as none occurred, operation was advised. A high right rectus incision revealed a gangrenous perforated gallbladder with pericholecystic adhesions. The gallbladder was enlarged to the size of a small grapefruit, and was buried in adhesions. There was free fluid in the abdomen, and as soon as the adhesions were partly released, pus and bile-stained fluid began to well up, and a perforation on the under side of the gallbladder was located. A large amount of pus and a number of stones were removed from the gallbladder. Stones were palpated in the common duct; but the general condition of the patient was so bad, and bleeding was so free where adhesions were released, that it was found impracticable to remove stones from the common duct. Free drainage was instituted in the gallbladder and neighboring region. The patient died seven days later from hemorrhage and exhaustion.

CASE 3.—A white woman, aged 35, gave a history of having repeated attacks of epigastric pain and tenderness in the right hypochondrium. Three weeks before admission to the hospital she had a violent attack of epigastric pain, followed by a chill, temperature and jaundice. Abdominal examination on admission revealed a mass in the right hypochondrium, with jaundice, increased leukocytes and rise of temperature. A diagnosis of empyema of the gallbladder was made and operation advised. Through a right rectus incision the gallbladder was exposed and found to be buried in a mass of omental adhesions. It was opened and found to contain pus and stones. We were unable to palpate anything in the common duct, although the head of the pancreas was markedly enlarged. The patient made an uneventful recovery with the exception of a persistent biliary fistula. Every time this fistula closed it would be followed by mild attacks of epigastric pain, jaundice and fever. We made the diagnosis of stone in the common duct and advised another operation six months later. At the second operation a stone could be palpated in the common duct under the head of the pancreas. A retroduodenal operation was done, the common duct rotated, and the stone excised from the back. Stitches were put in the duct and a small rubber drain put in the retroperitoneal space. As this patient already had a biliary fistula, we did not feel that a tube in the common duct was necessary. For two days following operation there was increased jaundice and a failure to discharge bile through the fistula. The patient began to have hemorrhage from the mucous membrane and fistula, and died four days later.

CASE 4.—A white woman, aged 65, had been suffering with digestive disturbances, pain in the epigastrium, and tenderness over the right hypochondrium for several years, and had jaundice with some of her attacks. Five weeks before admission to the hospital she was seized with severe colicky pain, chill, fever and jaundice. On admission her general condition was bad and jaundice severe. A diagnosis of cholelithiasis with stone in the common duct was made. We thought it best to delay operation, hoping that the jaundice would improve. Two days after admission to the hospital she had nosebleed. As her condition did not improve, one week after admission we operated on her, removing stones from the common duct and gallbladder and draining the common duct. For a few days she improved; then there occurred oozing through the drainage tube and gauze drainage in the cavity. This oozing continued off and on for about three weeks until the patient finally died from hemorrhage and exhaustion.

CASE 5.—A white woman, aged 40 years, was brought to the hospital two weeks after a severe epigastric pain, jaundice, chills and fever. Because of the intense jaundice we thought

it was best to postpone operation. She was kept in the hospital on continuous saline for six weeks, and the jaundice slowly disappeared. Three months after this attack I advised operation, although the patient was not clear of jaundice; but because of slight recurrence of symptoms I feared a complete obstruction. On operation a stone was found in the gallbladder, and one at the head of the pancreas; the latter was easily pushed back into the common duct above the duodenum. The duct was opened and the stone removed. There was a tendency to hemorrhage in the common duct. For some reason the duct did not drain for the first twenty-four hours, and then bile appeared through the tube and drain. Jaundice rapidly increased after the operation, and the patient began to have hemorrhage from the stomach and mucous membrane. She died thirty hours later.

COMMENT

From the histories of our five fatal common duct cases, it is seen that hemorrhage was the striking feature of all. Bleeding was the direct or strongly contributory cause of death in every instance. It is also apparent that the most rapidly fatal hemorrhage occurs in those patients in whom, for some cause, an acute exacerbation is superimposed on a chronic jaundice.

It has come to be universally recognized that delay and expectant treatment are indicated in some types of abdominal infection, but I am more and more inclined to believe that this rule cannot be followed with safety in cases of infection with obstruction of the common duct. Acute jaundice is not so potent a factor in producing the hemorrhagic diathesis as chronic jaundice is; therefore, hereafter, in common duct cases, the appearance of jaundice will be an important factor in my decision for immediate operation.

PNEUMOCOCCUS MENINGITIS

TREATMENT BY A SPECIFIC ANTIPNEUMOCOCCUS SERUM

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In 1917 I reported that out of 134 cases of pneumonia diagnosed by myself and colleagues in western Pennsylvania during the preceding eighteen months, there had been fourteen cases of pneumococcus meningitis, several of which, being Type I, were treated by the intravenous and intraspinal use of the antipneumococcus serum of the Rockefeller Institute, with very interesting results but without any recoveries.[1] Since that time I have become more and more convinced that pneumococcus meningitis occurs much more frequently than has been supposed and far more frequently than it is recognized. Liebermeister has stated that in 25 per cent. of the cases of pneumonia there is a distinct suppurative inflammation in the membranes of the spinal cord, even though their gross appearance be unchanged.[2]

Evidence of meningeal irritation is often observed during the course of a pneumococcus infection, and these phenomena are too often treated as unimportant —as mere incidents of the general toxemia or as meningismus. But there are no signs or symptoms by which these warnings can be set aside as due merely to a so-called meningismus, by which is meant that there is no actual pathologic condition of the meninges; nor can a positive diagnosis of meningitis be made from the clinical signs and symptoms alone. A lumbar puncture should be made, with microscopic and cultural examination of the fluid obtained, in all cases which present a suspicion of meningeal irritation, and the eye grounds should be examined daily for evidence of choked disk. Lumbar puncture should be done and the eye grounds examined also in all cases of coma in which meningitis is possible, as in coma developing during a pneumonia, empyema, otitis media or sinusitis, for the reason that signs of meningeal irritation, such as abnormal or exaggerated reflexes, disappear if the coma is sufficiently profound. In rare cases, even after all these methods have been employed, we may still be in doubt. Clear, normal cerebrospinal fluid may be obtained by lumbar puncture although there is purulent inflammation of the meninges localized at higher levels. However, it is the rarest exception for cases showing signs and symptoms of meningeal irritation not to present positive laboratory findings on lumbar puncture.

Pneumococcus meningitis may develop during the course of lobar pneumonia or bronchopneumonia. It may develop after the usual onset suggestive of a pneumonia without the development at any time of any definite signs of pulmonary consolidation. Or, the meningitis may develop during convalescence from pulmonary pneumococcus infection and run a subacute course of several weeks' duration before the usual fatal termination. Meningitis may develop by extension from a pneumococcus infection of the frontal, sphenoid, or mastoid sinuses or even directly from the middle ear. Cases of recovery from proved pneumococcus meningitis have occurred very rarely. This is borne out by the following citations:

Elsner: We have no record of recovery in which the diagnosis of pneumococcus meningitis was positively established.[3]

Councilman: Where the pneumococcus or streptococcus was found, none of these cases recovered.[4]

Osler: All of our patients die.[5] The meningitis of pneumonia is almost always fatal.[6]

Stevens: Meningitis due to pneumococcal infection may be primary or associated with pneumococcal infection elsewhere. Symptoms are severe and the result fatal.[7]

Latham and Torrens: Meningitis in the course of a pneumonic septicemia is rapidly fatal.[8]

Lloyd: The prognosis is unfavorable.[9]

Pye-Smith and Beddard: Meningitis as a complication of lobar pneumonia is usually purulent and uniformly fatal.[10]

Bovaird: Such complications as meningitis . . . are always fatal.[11]

Delafield: Pneumonia-acute meningitis is a very infrequent complication but a very fatal one.[12]

Hall: Pneumococcic meningitis is practically always fatal.[13]

1. Litchfield, Lawrence, in discussion on Cole, Rufus: Report of Studies Concerning Acute Lobar Pneumonia, J. A. M. A. **69**: 505 (Aug. 18) 1917.
2. Jores: The Common Diseases, Their Causes and Effects, translated by Woglom, Philadelphia, J. B. Lippincott Company, 1915, p. 146.
3. Elsner: Monographic Medicine, New York, D. Appleton & Co., **6**: 159, 1916.
4. Councilman: Handbook of Medical Science, 1904.
5. Osler: The Principles and Practice of Medicine, Ed. 8, New York, D. Appleton & Co., 1912, p. 90.
6. Osler: The Principles and Practice of Medicine, p. 97.
7. Stevens: Medical Diagnosis, London, H. K. Lewis & Co., 1910, p. 1411.
8. Latham and Torrens: Medical Diagnosis, New York, the Macmillan Company, 1915, p. 50.
9. Lloyd: Sajous Analytic Cyclopedia, Philadelphia, F. A. Davis Co. **6**: 597, 1914.
10. Pye-Smith and Beddard: System of Medicine, Allbutt and Rolleston, New York, the Macmillan Company **5**: 288, 1909.
11. Bovaird: Internal Medicine, Philadelphia, J. B. Lippincott Company, 1912, p. 26.
12. Francis Delafield, in Pepper: Theory and Practice of Medicine, Philadelphia, W. B. Saunders Company **2**: 552, 1894.
13. Hall: Borderline Diseases, New York, D. Appleton & Co. **1**: 442, 1915.

Babcock: Meningitis is a very serious complication of pneumonia and usually proves fatal in from two to four days.[14]

Whatever may be the route by which the lungs are invaded in pneumococcus infection, whether by extension through the bronchial tree or by distribution from the blood stream, a blood stream invasion with a widespread distribution of the pneumococci throughout the body is the rule very early in the disease. This being the case, it only remains for certain local conditions, as yet unknown, to be favorable, and there develops a suppurative meningitis, mediastinitis, pleuritis, peritonitis, arthritis, bursitis, otitis, myositis, mastoiditis, thrombophlebitis, sinusitis, conjunctivitis or other complications.

During the fulminant onset of the epidemic of pneumonia at Camp Grant in the fall of 1918, the necropsies of Captain Hirsch furnished abundant evidence for the conception of pneumococcus infection just given, the presence of pneumococci in the cerebrospinal fluid being repeatedly demonstrated when there was no clinical or histologic evidence of meningitis. We cannot say that these patients would have developed pneumococcus meningitis if they had lived long enough, but we know that at least one prerequisite was present. In my opinion the presence of pneumococci in the cerebrospinal fluid is an indication for the intraspinal use of a bactericidal antipneumococcus serum such as the Kyes serum; but the presence of bacteria alone, without evidence in the cerebrospinal fluid of an inflammatory process, even though accompanied by signs and symptoms of meningeal irritation, does not prove that there is or ever will be a meningitis, although it makes such a development highly probable.

The results obtained by Capps at the Cook County Hospital during the winter of 1916-1917,[15] and at the base hospital at Camp Grant during the winter of 1917-1918 in the treatment of pneumonia with the antipneumococcus serum of Dr. Preston Kyes, made me very anxious to try this serum in cases of pneumococcus meningitis. Through the courtesy of the University of Chicago and the enthusiastic cooperation of Dr. Kyes, an abundance of serum was placed at my disposal; the recent epidemic furnished the cases.

The epidemic of influenza, so called, began at Camp Grant, September 19. In three or four days the victims of influenza began to develop pneumonia. October 11, my morning report showed 1,508 cases of pneumonia in the hospital. During the eight weeks we had over 10,000 cases of influenza with about 2,700 cases of pneumonia. The medical officers were asked to report at once any cases showing signs of meningeal irritation. Nearly a month after the onset of the epidemic, cases of pneumococcus meningitis began to appear.

The number of cases of meningitis in proportion to the number of cases of pneumonia was much smaller than I should have expected. The small number of cases of meningitis, as well as their rather late appearance, may have been due to the unusual virulence of the pneumonia at the onset, which carried off many of the patients before meningitis had had time to develop, just as pneumococcus empyema develops very rarely in rapidly fatal cases of pneumonia, and in this epidemic did not appear until late, after the virulence of the invading pneumococci seemed to be diminished.

14. Babcock: Diseases of the Lungs, New York, D. Appleton & Co., 1907, p. 245.

15. Reported by Kyes, P.: The Treatment of Lobar Pneumonia with an Antipneumococcus Serum, J. M. Res. **38**: 495-501 (July) 1918.

We had the opportunity of treating ten cases of typical pneumococcus meningitis with the Kyes serum. The clinical diagnoses in all of these cases were verified by consultants, and the etiology was established in each case by abundant laboratory findings. Of the ten patients, five died and five recovered. As far as the meningitis was concerned, there was no difference clinically between the condition of the patients who recovered and the condition of those that died. Some of the patients with the most intense symptoms of meningitis recovered. Some of the milder cases ended fatally owing to extensive involvement of other organs, as shown by necropsies. The treatment was the same in all cases.

REPORT OF CASES

For the sake of brevity only the briefs of the successful cases are here given:

Case 1.—P. O., aged 24, colored, whose occupation was that of laborer, admitted to the hospital Oct. 3, 1918, had had measles, mumps, malaria, pneumonia and typhoid fever—all in childhood. On examination there were restricted breath sounds in the left lower lobe and a few râles. The abdomen was flat; the liver had no enlargement; the spleen was negative, the reflexes were negative, and the nervous and osseous systems were negative.

The present trouble began three days before admission to the hospital, with chills and fever, pain in the back, sore throat, headache, constipation and violent paroxysms of coughing.

Lobar pneumonia was diagnosed, October 15, in the right lower lobe. There was no herpes.

October 22, the condition was good. There was still some consolidation in the right lower lobe with fine râles.

October 27, the patient complained of pain in the chest and the lumbar region. The temperature rose to 103; the pulse was 88 with signs and symptoms of meningitis.

October 28, 10 c.c. of spinal fluid were withdrawn and 10 c.c. of Kyes serum were given intraspinally. The spinal fluid was clear; the white cell count was 720 per cubic millimeter. Sugar and globulin were negative. Direct smear and culture were negative. Blood count revealed 28,800 leukocytes.

October 29, the spinal fluid showed a white cell count of 1,810 per cubic millimeter. Globulin and sugar test were negative. Direct smear disclosed a few organisms, morphologically pneumococcus. Culture revealed a pneumococcus.

Kyes serum was given daily intravenously and intraspinally from October 28 to November 24.

October 31, the patient still had opisthotonos, ankle clonus, Babinski reflex and fixed pupils.

November 26, his condition was practically normal, without evidence of any sequelae.

December 1, his eye grounds and reflexes were all normal except for rather marked general cutaneous hyperesthesia.

Case 2.—E. B., aged 22, colored, whose occupation was that of farmer, was admitted to the hospital Oct. 11, 1918. The family history was good. The patient had had measles, whooping cough, malaria and pneumonia in childhood. The present illness began October 10, with a severe headache, chills and fever. The following day herpes developed on the lips.

October 16, signs and symptoms of meningitis were confirmed by spinal puncture. Kyes serum was given intraspinally and intravenously, from 5 to 10 c.c. at a dose. There was septic type of temperature, ranging from 101 to 104; then, from 97 to 103, gradually reaching normal about November 1. The pulse varied between 85 and 100 until October 20, after which time it ranged between 60 and 85; after November 1, it was practically normal. October 21, the Kernig sign and the Babinski reflex were present and there was rigidity of the neck. October 22, there was a severe chill. October 23, acute bilateral tonsillitis appeared. October 26, there was delirium and opisthotonos. Laboratory reports, October 22, were that the spinal fluid was very turbid and the cell count 4,200. Direct smear gave a pneumococcus. Cultures were negative.

October 26, the fluid was turbid, white cell count 2,850, sugar negative, globulin positive, direct smear pneumococcus, culture negative.

October 29, a culture from the cerebrospinal fluid was reported positive for the pneumococcus. This patient received Kyes antipneumococcus serum from October 16 to October 29, intravenously and intraspinally, receiving in all 105 c.c.

December 1, his eye grounds and reflexes were normal, and his general condition was excellent. There was no evidence of sequelae.

CASE 3.—W. E. F., aged 32, white, whose occupation was that of cook, was admitted to the hospital, Oct. 13, 1918. The patient's mother died in 1914, from cancer of the breast. The family history was otherwise negative. The previous personal history was good. The heart and lungs were negative. The genito-urinary system was negative. The special senses were normal. The present illness began, October 10, with a severe cold in the head, accompanied by headache, backache, flushed face, weakness and vomiting. The vomitus was blood-streaked. The temperature on admission was 102; pulse, 88; respiration, 28. There were râles at the base of both lungs. The reflexes were normal. The patient became delirious at once. October 15 the headache was still severe. Pneumonia with pleurisy was diagnosed in the right lower lobe.

October 21, the neck was stiff, the pupils were contracted and fixed, and the patient was semicomatose. The temperature was 100; respiration, 32. The laboratory report on the cerebrospinal fluid was white cell count 40 per cubic millimeter. Direct smear gave a few gram-positive, lancet-shaped diplococci. A culture revealed pneumococcus in pure culture. On the 26th, the spinal fluid was slightly cloudy, the white cell count was 180; sugar was positive, and globulin negative. Direct smear and culture were both negative.

From October 21 to the 26th, the temperature ranged from 100 to 103; the pulse for the most part, 90 to 100; respiration, from 30 to 40. There was gradual improvement until temperature, pulse and respiration became normal after November 1. Kyes antipneumococcus serum was injected intraspinally, October 21, 23 and 26. A direct improvement was noted, both mental and physical, after October 23.

Four doses of 5 c.c. each were given intraspinally and 5 c.c. of the same serum were given intravenously, once or twice daily, during the course of the pneumonia.

December 1, the eye grounds and reflexes were normal, the general condition was excellent, and there was no evidence of sequelae.

CASE 4.—M. O., aged 22, colored, whose occupation was that of farmer, was admitted to the hospital, Oct. 27, 1918. The father had died from tuberculosis. The personal history was negative except for frequent tonsillitis. The present trouble began October 25, with chill, sore throat, stiff neck, aching all over, cough and some delirium, swollen tonsils, and follicular exudate. The heart and lungs were negative. Later, there was consolidation of the left lower lobe. The genito-urinary system was negative. The special senses were normal. The spleen was not palpable. The skin reflexes were normal.

November 14, there was diagnosis of meningitis. The Kernig sign still remained on the left side, the neck was stiff, and there was a suggestion of the Brudzinski sign. There was no Babinski or Oppenheim reflex; the pateller reflexes were sluggish. The abdominal reflexes of the left upper and lower quadrants and the left cremasteric were absent. Lumbar puncture revealed the cerebrospinal fluid to be under moderate pressure.

November 17, the spinal fluid gave a white cell count of 1,300; sugar was negative, and globulin was positive. Direct smear revealed numerous gram-positive diplococci; culture gave a pneumococcus. November 26, the white cell count was 6,400; sugar was positive, and globulin was positive. Direct smear was negative.

November 28, the cell count was 3,800; sugar was positive; globulin was positive; smear and culture were both negative.

The temperature ran a septic course, from 100 to 103; pulse, 88 to 108; respiration, 20 to 26, for this period of about two weeks. This patient was desperately ill and received 15 c.c. of Kyes serum intraspinally twice daily at first and later once daily, with 5 c.c. intravenously twice and later once daily. He received in all 453 c.c. On several days he received three intraspinal injections within twenty-four hours on account of the severity of the meningeal symptoms.

Leukocytosis varied between 16,000 and 18,000, but only four counts were made and those between October 20 and November 15.

December 2, the eye grounds and reflexes were normal. The patient's general condition was excellent. There was no evidence of sequelae. Temperature, pulse and respiration were normal. The patient ate and slept well.

CASE 5.—N. J. S., aged 25, white, whose occupation was that of farmer, was admitted to the hospital, Dec. 9, 1918. The family history was negative. The personal history gave the usual diseases of childhood. The patient had had "clinical influenza" in October and pneumonia a year previous to the present attack. There was no venereal history. The onset was accompanied by sore throat and headache, December 6, headache being so severe the previous night as to prevent sleep. The examination on the date of admission to the hospital was negative, except that the tonsils were injected and probably slightly swollen. The patient walked to the hospitla. December 11, the patient still complained of severe headache, mostly frontal; was rational and answered all questions promptly. On examination, the suboccipital muscles were stiff and the head slightly retracted. Tendon reflexes were exaggerated and marked Kernig and Babinski signs were present; the abdominal muscles were rigid, and general hyperesthesia was marked. Fifty c.c. of spinal fluid were withdrawn and 30 c.c. of antimeningococcus serum were introduced intraspinally. The spinal fluid gave a cell count of 5,400 per cubic millimeter; sugar was negative, and there was a slight increase of globulin. Direct smear gave a few gram-positive, lancet-shaped diplococci, morphologically pneumococci. Culture was negative after forty-eight hours.

December 11, after laboratory report was made on the morphology of the bacteria in the spinal fluid, 60 c.c. of spinal fluid were withdrawn and 20 c.c. of Kyes serum were introduced intraspinally and 5 c.c. intravenously. From this time until Dec. 28, the patient was continually delirious. Neck rigidity continued, with retraction of head until Dec. 17, when relaxation began to be evident. Severe headache was usually complained of during this period, and the reflexes continued to be exaggerated. The temperature ranged between 100 and 103, with slight morning remissions, until December 17, when decided remissions down to 99 began to occur, with afternoon rises to 102. The pulse ran between 60 and 80, and respiration, though often stertorous, was not affected in frequency. From December 17 until the 28th, symptoms gradually disappeared, until on the latter date the patient was fairly rational and was able to state on being questioned that he had no recollection of what had occurred up to that time; that he remembered nothing of the intraspinal injections. Laboratory reports on examinations of spinal fluids withdrawn when intraspinal medication was given revealed: December 13, cell count 16,000 per cubic millimeter; sugar was negative and globulin was positive. Direct smear gave gram-positive, lancet-shaped diplococci, morphologically pneumococci; culture was negative. December 16, the cell count was 4,000 per cubic millimeter; sugar was negative, and globulin showed a large increase. Direct smear disclosed many gram-positive diplococci, many of which were intracellular; culture revealed pneumococci. December 19, direct smear showed a few gram-positive diplococci, morphologically pneumococci, but culture was again negative.

After the first intraspinal injection of 30 c.c. of antimeningococcus serum, on December 11, 20 c.c. of Kyes antipneumococcus serum were injected intraspinally twice daily until December 17; 5 c.c. were also given intravenously twice daily.

December 18 and 19, 20 c.c. of serum were given intraspinally and 5 c.c. intravenously, both once daily, after which serum administration was discontinued, though the patient continued to have a slightly increased temperature between 99 and 100 until December 28, when it reached normal and remained so. Muscle rigidity and exaggerated reflexes have gradually been disappearing until at the present time (January

31)[16] all such symptoms have virtually disappeared, and the patient can be said to have made a complete recovery. He has been up and about the ward for the last two weeks. December 15, ophthalmic examination showed a moderate swelling of the disks. December 26, there was a slight enlargement of veins but no tortuosity. There was a very slight swelling of the disks. It should be noted that no pulmonary involvement occurred in this case."[16]

All of these patients were treated in the open air, with the usual routine of digitalis and, when necessary, salines, morphin, bromids, atropin, epinephrin and caffein.

The fragmentary and incomplete character of these case histories is due to the stress of work in the hospital during this epidemic. As far as they go, however, they are absolutely dependable.

The laboratory work was done under the able direction of Capt. E. F. Hirsch, in charge of the pathologic service of the base hospital.

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COMPARATIVE PROGNOSIS OF TUBERCULOUS LESIONS OF RIGHT AND LEFT LUNG

REPORT OF FIVE HUNDRED CASES

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During the routine reexamination of patients in the women's service at the Ohio State Sanatorium, it had been my observation that cases with the greater amount of active involvement in the left lung made progress slower toward quiescence than cases in which the right lung was more involved. A few years ago, while doing a large number of necropsies on tuberculous subjects, I repeatedly noticed that in the majority of cases of bilateral tuberculosis the right lung showed considerable involvement at the apex, with a marked tendency toward fibrosis; whereas the left lung was usually heavily infiltrated from the apex to the base, with a thickening of the pleura and very firm pleural adhesions but with very little fibrosis of the lung. From this I judged that the initial lesion had been in the right lung, but that the left lung showed the greater amount of active involvement.

Since that time, in closely observing roentgenograms of moderately advanced and of advanced cases, I have noticed that the right lung shows evidence of heavy fibrosis much more frequently than does the left lung. In checking up a number of pneumothorax cases I found that in 75 per cent. the left lung was the one that had to be collapsed; and if we considered the cases in which pneumothorax was advised but patients would not consent to it, the percentage of leftsided cases would be far greater than this.

With the assistance of our statistician, Miss L. A. Steeves, I compiled the results secured in the treatment of the last 350 patients admitted to the sanatorium whose length of stay was six months or longer, and also of the last 150 patients admitted whose stay was one month or less—who were classed as far advanced cases on admission and were discharged as too sick for our sanatorium routine. Our findings compare fairly closely with the report given by Tecon and Aimard,[1] except for the fact that we found a greater percentage of left lung infections in the advanced cases than they. In their report they state that in 77 per cent. of their pneumothorax cases the left lung was the one collapsed, and that of 83 per cent of incipient cases that were apparently healed, only 7.5 per cent. were of the left lung. They also mention that 14 per cent. of left lung cases had grown worse as compared with 6 per cent. of right lung cases.

TABLE 1.—LUNG INVOLVEMENT IN ONE HUNDRED AND FORTY-EIGHT FAR ADVANCED CASES IN WHICH THE PATIENTS WERE DISCHARGED AS TOO SICK

	Number	Per Cent.
Right lung	59	40
Left lung	89	60
Both lungs	89	60
Right most	37	25
Left most	52	35
Left lung only	37	25
Right lung only	22	15
Right cavity	37	25
Left cavity	35	24

Owing to the lack of hospital facilities, the institution is unable to take care of far advanced cases needing absolute bed care. If a patient is unable to go to the dining hall for his meals, owing to a constant high fever, marked constitutional symptoms, hemorrhages, or general weakness, which may necessitate absolute bed care for a long period of time, he is discharged as too sick for our routine. It is from this group that Table 1 was compiled.

In reviewing the 148 cases that were discharged as unimproved, their stay at the institution being less than one month, there were 40 per cent. in which the right lung was involved either alone or with some involvement of the left lung, and 60 per cent. in which the left lung was involved alone or with some involvement of the right lung. Sixty per cent. of the total showed evidence of active tuberculosis in both lungs. Of the number of cases in which both lungs were involved, 25 per cent. of the total showed evidence of the greater amount of involvement in the right lung and 35 per cent. evidence of the greater amount of involvement in the left lung. Twenty-five per cent. showed the left lung alone involved, and 15 per cent. the right lung. The right lung showed evidence of cavity formation in 25 per cent. of the cases, as compared with 24 per cent. in the left lung.

TABLE 2.—MALE AND FEMALE PATIENTS WHOSE STAY WAS SIX MONTHS OR LONGER

	Male		Female	
Age	Number	Per Cent.	Number	Per Cent.
6 to 10	3	1.5	1	0.7
11 to 20	39	20.4	32	20.9
21 to 30	83	43.5	84	54.9
31 to 40	47	24.6	17	11.1
41 to 50	13	6.8	18	11.7
51 to 60	4	2.2	1	0.7
61 to 70	2	1.0	0	0.0
Total	191		153	
	344			

In analyzing these figures, it seems that in far advanced cases of active pulmonary tuberculosis the percentage of left lung infections is greater than of the right lung, whereas it has been proved that the majority of early tuberculous cases present right lung infections.

16. The history of this case, as well as important aid throughout the work, was furnished by Capt. A. W. Gray of Milwaukee, my valued assistant, and the present chief of the medical service.

1. Tecon and Aimard: Pulmonary Tuberculous Processes, Rev. Méd. de la Suisse Rom. 37: 45 (Jan.-Feb.) 1917.

AGE

In analyzing the age of the patients, the greatest percentage of tuberculous infections in both male and female occurred between the ages of 21 and 30, there being 43.5 per cent. male and 54.9 per cent. female within these age limits. In the female, the ages between 11 and 20 rank second in percentage, with 20.9 per cent.; whereas, in the male, the ages between 31 and 40 rank second, with 21.6 per cent.

CLASSIFICATION OF CASES ON ADMISSION

Of the 191 male patients, 12 per cent. were classed on admission as incipient, 67.6 per cent. as moderately advanced, and 20.4 per cent. as advanced. Of the 153 female patients, 26 per cent. were classed as incipient, 54.9 per cent. as moderately advanced, and 19.1 per cent. as advanced. The National Tuberculosis Association standard of classification was used, cases being considered Turban I, II or III, respectively. From

TABLE 3.—CLASSIFICATION OF CASES ON ADMISSION

	Male			Female		
	Number	Per Cent.	Per Cent. of Total	Number	Per Cent.	Per Cent. of Total
Incipient, Turban I.....	23	12.0	6.7	40	26.0	11.6
Moderately advanced, Turban II.....	129	67.6	37.5	84	54.9	24.4
Advanced, Turban III..	39	20.4	11.4	29	19.1	8.4
Total.....	191			153		
	344					

Table 3 we see that there were more than twice as many female incipient cases in comparison with the number of male incipient cases, and less female moderately advanced and advanced cases than there were male.

LUNG INVOLVED

In reviewing Table 4 we find that there were 172 cases in which the right lung showed the greater amount of involvement and the same number in which the left lung was more involved. In the male, the incipient cases showed 8.1 per cent. right lung infections as compared with 5.2 per cent. left; the moderately advanced cases, 45.3 per cent. right as compared with 29.5 per cent. left; and the advanced cases, 9.3 per cent. right compared with 13.4 per cent. left. In the female incipient cases there were 12.2 per cent. right compared with 11.6 per cent. left; moderately advanced

TABLE 4.—INVOLVEMENT OF RIGHT AND LEFT LUNGS

	Right			Left		
	Number	Per Cent.	Total Per Cent.	Number	Per Cent.	Total Per Cent.
Incipient:						
Male.....	14	8.1	4.2	9	5.2	2.6
Female.....	21	12.2	6.1	20	11.6	5.8
Moderately advanced:						
Male.....	78	45.3	22.7	51	29.5	14.8
Female.....	33	19.2	9.6	50	29.1	14.6
Advanced:						
Male.....	16	9.3	4.6	23	13.4	6.7
Female.....	10	5.9	2.8	19	11.0	5.5
Total.....	172			172		
	344					

cases, 19.2 per cent. right compared with 29.1 per cent. in the left; and in the advanced cases, 5.9 per cent. right compared with 11 per cent. in the left lung.

In analyzing this table, we find that in the incipient cases the percentage is greater on the right side, and in the male the percentage of moderately advanced right side cases is almost 2:1, as compared with the left, but in the female the ratio of left to right-side infections is about 3:2. In the advanced cases the percentage of right side infections as compared with left is exactly reversed to the percentage of male incipient cases, and the advanced cases in the female show a left to right proportion of 2:1. The greater percentage of right-sided cases in the incipient stage of both male and female, and the moderately advanced stage of the male, is counterbalanced by the moderately advanced left-sided female cases and far advanced cases of both male and female, making the percentage of left and right equal when all stages of the disease are considered.

TABLE 5.—LUNG INVOLVEMENT IN THREE HUNDRED AND FORTY-FOUR CASES

	Right Lung Only		Left Lung Only		Total Both Lungs		Both Lungs R. Most		Both Lungs L. Most	
Total Cases	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.
344	40	11.3	35	10.2	269	78.5	133	38.6	136	39.9

Of the 344 cases, 11.3 per cent. had the right lung alone involved, 10.2 per cent. the left lung alone involved, and 78.5 per cent. showed both lungs involved, 38.6 per cent. having the greater involvement in the right lung and 39.9 per cent. showing the greater amount of involvement in the left lung.

CONDITION ON DISCHARGE

Of the patients discharged as arrested, 16.6 per cent. were right-side cases; whereas there were only 8.8 per cent. left-side cases. The proportion of right-side as compared with left-side cases in the male was 4:3, and in the female the proportion was 4:1. Of the female cases there were only 4.5 per cent. of left-side cases discharged as arrested, and in the male 13.2 per cent. The male cases discharged as apparently arrested showed a proportion of right to left of about 3:1; whereas in the female cases the proportion was 2:1. There were 7.2 per cent. apparently arrested cases of left lung infections in the male and 10.1 per cent. in the female. The percentage that reached the stage of quiescence was greater in the left of both male and female than in the right, the proportion in the male being 3 left to 2 right, and in the female almost 2:1. The percentage of improved and unimproved in the male cases was greater in the left, whereas the right lung improved in the greater percentage of cases in the female. The percentage of unimproved in the female showed a proportion of about 2 left to 1 right.

TABLE 6.—CONDITION ON DISCHARGE

	Male				Female			
	Right		Left		Right		Left	
	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.
Arrested.....	19	17.6	11	13.2	10	15.6	4	4.5
Apparently arrested.	22	20.3	6	7.2	11	17.2	9	10.1
Quiescent.....	23	21.3	26	31.3	15	23.4	34	38.2
Improved.....	23	21.3	20	24.1	23	35.9	27	30.3
Unimproved.....	21	19.5	20	24.1	5	7.8	15	16.9
Total.....	108	56.5	83	43.5	64	41.8	89	58.2
	191				153			

Table 6 shows very clearly that in the male cases there is a greater tendency toward arrestment or

apparent arrestment than in the female, and that in both male and female the right lung becomes arrested or apparently arrested far more often than does the left lung. The left lung cases show a great tendency toward becoming quiescent, but the progress from this stage seems to be much slower in the left than in the right.

SPUTUM ANALYSIS ON ADMISSION AND DISCHARGE

The sputum specimens of the right incipient cases of the male that were positive for tubercle bacilli on admission all became negative before discharge; but in both the right-side and the left-side cases of the female incipient cases the sputum remained unchanged.

TABLE 7.—SPUTUM ANALYSIS ON ADMISSION AND DISCHARGE

	Male				Female			
	Right		Left		Right		Left	
Incipient:	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
Admission	5	9	4	5	5	16	5	15
Discharge	0	14	3	6	5	16	5	15
Moderately advanced:								
Admission	63	15	45	6	17	16	33	17
Discharge	57	21	42	9	13	20	37	13
Advanced:								
Admission	15	1	21	2	8	2	16	3
Discharge	14	2	21	2	7	3	17	2

In the moderately advanced and advanced left-side female cases there was a greater number with positive sputum on discharge than on admission.

AVERAGE LENGTH OF STAY IN MONTHS

The average length of stay of the incipient cases was about 8.7 months. The left female cases stayed the longest time, averaging 10 months. The length of stay of the moderately advanced cases averaged 9.9 months, the female cases averaging about one month longer than the male. The average length of stay of the advanced cases was about 9.1 months, the male left-side cases averaging the longest stay, which was 11 months.

In 15.1 per cent. of the cases the left lung got worse and in 12 per cent. of cases the right became worse. The left-side cases averaged about 0.4 degree higher temperature on admission than did the right-side cases, and averaged about two weeks longer for the temperature to drop to normal or subnormal, in cases which reached this stage. The left-side cases were more persistent in presenting a constant or an occasional afternoon increase of temperature. There was no apparent difference in the pulse rate of either right-side or left-side cases, and all cases averaged about four months for the pulse to drop to 90 or lower at all times during the day in those that reached the point of quiesence, apparent arrestment or arrestment.

TABLE 8.—AVERAGE LENGTH OF STAY IN MONTHS

	Incipient		Mod. Advanced		Advanced	
	Right	Left	Right	Left	Right	Left
Male	8.5	7.8	9.8	9.1	7.8	11.0
Female	8.7	10.0	10.6	10.1	8.7	8.8

The average gain in weight of the right-side cases was 12.8 pounds as compared with 14.8 pounds of left-side cases.

I have repeatedly noticed that patients who gain a great deal of weight very rapidly will not stand exercise as well as those in whom the gain in weight is not so rapid, or in whom there is not very much gain in weight. The patients who gained weight very rapidly showed a tendency to become tired and to have a rise in temperature with a very rapid pulse on the least exertion, and they had to be given absolute bed care for a longer period of time, in spite of their gain in weight and their apparent rapid improvement, than patients with the same amount of involvement in the right lung. In patients who gain in weight very rapidly, exercise must progress slowly; but once they attain the point of a resistance against a small amount of exercise, then graduated exercise progressing fairly rapidly may be instituted.

All patients were examined about every two months, the weight was taken every week, and records were kept of the daily conduct of the patient.

The percentage of cases that showed albumin in the urine was very small. Two of the patients showed evidence of sugar in the urine on admission and on discharge, and another patient showed sugar on admission but no sugar on discharge.

CONCLUSIONS

In the far advanced cases that were discharged from the institution as too sick for our routine, the percentage of left-side cases was greater than of right. From this we can plainly judge that in this type of case, when the left lung shows the greater amount of involvement, the prognosis of building the person back to some working capacity or of bringing the chest to at least a point of quiescence is far less than of the right lung cases.

In the case of patients whose stay was six months or longer, the percentage of left-side cases which became apparently arrested or arrested was far less than of right-side cases, even though the average length of stay was slightly longer. This would also point to the fact that the prognosis of left lung infections, even in incipient cases, is considerably less favorable than of right-side cases. To say that a left lung infection will not improve or will not become quiescent may not always be true; nevertheless it is a fact that these cases make much slower progress than the right-sided cases, and the percentage of these patients returned to a normal working capacity or to a state of health in which they may enjoy life is far less than of those with right-side involvement.

Patients with left-side involvement should be given a longer period of absolute bed care; and when exercise is begun, it should be prescribed guardedly and increased slowly. A number of these patients may present a normal or a subnormal temperature with only a slight variation between morning and afternoon and a fairly constant pulse, but on physical examination will show little tendency toward fibrosis, and when exercise is prescribed may stand it very well for a while but will have a return of clinical symptoms, which is their first warning of a possible breakdown, much sooner than a patient with the same amount of involvement in the right lung.

There are several reasons which may account for the more rapid spread of a tuberculous focus in the left lung than in the right. The left lung is considerably smaller than the right and has but two lobes. The bronchus leading to the left lung forms a more obtuse angle and is much smaller than the right bronchus. There are two fissures on the right and only one on the left. The interlobar clefts fence in the infection and prevent one lobe from becoming infected by the other except through the regular channels along the bronchial tree. This fencing by the interlobar pleura

is repeatedly seen on roentgenograms of the chest and also in the sectioning of tuberculous lungs at necropsy.

SUMMARY

1. The amount of involvement being equal, the prognosis of lesions of the left lung is not as good as of the right.
2. Prognosis of the male cases is better than of the female cases.
3. There is less tendency toward fibrosis in the left as compared with the right lung.
4. Patients with active tuberculous lesions in the left lung require absolute bed care over a longer period of time than the right-side cases to produce the same results.
5. Rapid gain in weight, especially of the left-side cases, does not always mean rapid progress toward quiescence.
6. Artificial pneumothorax of the left lung is more frequent than of the right.
7. The greater number of incipient cases show tuberculosis of the right lung, and the greater number of advanced cases in the left lung. The percentages of right and left lung cases are equal when all stages of the disease are considered.

A REPORT OF SIXTY CASES OF WOUND DIPHTHERIA*

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WITH BACTERIOLOGIC APPENDIX BY

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FRANCE

I. CLINICAL

BY LIEUTENANT HARTSELL

In reporting these cases of wound diphtheria it is necessary, first, to say a word about throat diphtheria occurring in our hospital. During the fall and early winter, throat diphtheria appeared; and while it never approached a real epidemic, its incidence was greater than would be expected in a hospital community. Our hospital during this time furnished more cases than any other unit, and some weeks furnished about two thirds of all the cases in a center of from eight to twelve hospital units. In our hospital, Ward A-1 furnished most of the cases. The first case of throat diphtheria appeared in Ward A-1, Oct. 14, 1918. Up to November 15, five other cases of throat diphtheria appeared. November 16, a general throat culture of the entire ward disclosed five carriers. In December, five clinical diphtherias and four carriers were found. January 2, another carrier was found. From October 14, to date, February 1, therefore, Ward A-1, with patients ranging from eighty to 150, had eleven true throat diphtherias and ten carriers, and it was in this ward that the outbreak of wound diphtheria centered.

The first case of wound diphtheria appeared in a large debrided wound of the thigh. This wound was of several weeks' standing and had been doing well under Carrel-Dakin treatment until November 20, when it suddenly showed a gray-black membrane quite typical of wound diphtheria. Cultures this date and December 9 and 12 were negative. December 13, however, showed a positive culture. Subsequent cultures were positive up to December 31, and then remained negative.

This discovery focused attention on wounds in this ward as the possible source of the continual throat diphtheria. Cultures of all the wounds in the ward were taken on the 13th, and eighteen were found positive. The ward was immediately placed under strict quarantine and the most careful wound technic established.

The large number of cases in Ward A-1 raised a question as to the other wards. Cultures of the patients in these were then taken about once each week, and to date forty-one cases have been found in the other fourteen surgical wards, each ward having from thirty to sixty patients. All these cases picked up in the other wards were immediately transferred to Ward A-1, partly for better isolation and partly for more intensive treatment and more systematic study as a group. The cases in the other wards were irregularly scattered. Some wards had none, others from one to five. In some wards new cases would be found on each successive weekly test, although the patients found the week before were removed at once. Some wards showed a case or two on the third test which had been negative on the previous two. Three cases were picked out of a group of 100 surgical patients who were transferred to our hospital from another unit in the center.

REPORT OF CASES

CASE 1.—Sergeant T. was admitted to Ward A-1, Oct. 8, 1918, with a gunshot wound of the right thigh. November 29, the wound showed a dirty gray membrane; cultures on this date and on December 9 and 12 were negative. December 13, wound culture was positive. Cultures twice weekly remained positive until December 31, during which time the patient had received four doses of diphtheria antitoxin of 20,000 units each. On this date the Carrel-Dakin treatment was discontinued and the wound cleaned with a 1 per cent. soap solution, ether and alcohol and painted with U. S. P. tincture of iodin once daily. All subsequent cultures have remained negative. The Schick test, December 17, was negative.

CASE 2.—Private N. was admitted to Ward A-1, October 7, with a shrapnel wound of the right thigh. The Carrel-Dakin treatment was used until December 6. A dichloramin-T dressing was then used until the 13th, when wound culture showed positive for diphtheria. The wound was then treated daily with tincture of iodin as in Case 1, and on December 18 wound culture was negative and cultures twice weekly since then have remained negative. The Schick test, December 17, was negative.

CASE 3.—Private G. was admitted to Ward A-1, November 3, with a large, infected, debrided wound of the buttocks, which was treated by the Carrel-Dakin method. December 13, it showed a positive wound culture and remained positive until December 31. January 1, the Dakin tubes were removed and the wound cleaned and painted with tincture of iodin. Since then all cultures have been negative. The Schick test, December 17, was negative.

CASE 4.—Private K. was admitted to Ward A-1, October 4, with a gunshot wound of the right leg with a compound comminuted fracture of both bones. December 13, it showed a positive culture. December 20, culture was negative, and all subsequent cultures were negative. This wound was treated entirely by the Carrel-Dakin method. The Schick test was negative, December 17.

CASE 5.—Corporal K. was admitted to Ward A-1, November 14, with multiple small furuncles of both ankles. These

* Owing to lack of space, this article is abbreviated in THE JOURNAL by the omission of some of the case reports. The complete article appears in the reprints.

were dressed with dichloramin-T. December 13, they showed a positive cure for diphtheria. A dressing of tincture of iodin was applied daily. December 23, culture was negative and has remained negative. December 17, the Schick test was positive, and the patient was given 1,500 units of antitoxin.

CASE 6.—Corporal C., admitted to Ward A-1, October 7, with a through-and-through gunshot wound of the left thigh, presented two large debrided wounds, one on the outer and one on the inner side of the thigh. Both showed a positive culture, December 13. The inner wound was treated with neutral solution of chlorinated soda (Dakin's solution) every two hours, and the outer wound with a wet dressing of 5 per cent. acetic acid. Both wounds remained positive until December 27, when the foregoing dressings were discontinued and the wound treated with tincture of iodin. Since then all cultures have been negative. The Schick test, December 17, was negative.

CASE 8.—Private E. was admitted to Ward A-1, November 12 with a large wound of the left buttock which was treated by the Carrel-Dakin method. December 13, culture was positive, and the wound remained positive at each subsequent culture until January 31, in spite of any type of treatment. The wound was treated at first with Dakin's solution, and the patient received four doses of diphtheria antitoxin of 20,000 units each. Dakin's solution was discontinued and the wound dressed twice daily with undiluted diphtheria antitoxin. Since January 9, the wound has been dressed twice daily with tincture of iodin, and we were able to get our first negative culture, January 31. The wound, however, has remained "clean," and healing has progressed rapidly. The Schick test, December 17, was negative.

CASE 11.—Private B. was admitted to Ward A-1, October 17, with a large debrided wound of the left thigh, which was treated with dichloramin-T. December 13, wound culture was positive. Dakin's solution was given a thorough trial; then 5 per cent. acetic acid as a wet dressing was used, and on December 31, the wound was cauterized with pure phenol neutralized in a few seconds with alcohol, but with negative results. January 2, tincture of iodin was used, and on the 6th we obtained a negative culture and the wound has remained negative with daily dressings of tincture of iodin. December 17, the Schick test was negative.

CASE 15.—Private W. was admitted to Ward A-1, October 4, with a gunshot wound of the left foot, which was dressed daily with dichloramin-T until December 13, when culture showed positive. This was another very obstinate case and was complicated by a very marked dermatitis which had been caused either by the improper preparation or the improper application of the dichloramin-T. The wound was dressed daily with iodin, and with the exception of negative culture, January 9, remained positive until January 24. Cultures since then have been negative. The Schick test was positive.

CASE 20.—Private B. was admitted to Ward A-1 from Ward A-2, December 17, with positive wound culture for diphtheria. The wound was treated with tincture of iodin, and on December 20, culture was negative. December 21, the Schick test was positive. Throat culture proved the patient a diphtheria carrier, and he was transferred to another hospital in the center for diphtheria carriers.

CASE 29.—Private C. was admitted to Ward A-1 from Ward A-4, December 19, with a positive wound culture for diphtheria. This wound was covered with a dirty gray membrane, and diphtheria antitoxin was used; 20,000 units were given every forty-eight hours for four doses, with negative results. The wound was treated daily with tincture of iodin, and the first negative culture was obtained, December 31. All cultures since then have been negative. The Schick test was negative.

CASE 33.—Private S. was admitted to Ward A-1 from Ward B-1, December 20, with a positive wound culture. This wound was covered with a thick gray membrane quite typical of diphtheria. Tincture of iodin was used daily until December 26 with negative results, when the patient developed clinical diphtheria and was transferred to an isolation ward in another unit. The Schick test was negative.

CASE 43.—Private N. was admitted to Ward A-1 from Ward B-10, December 30, with a positive wound culture. The wound was covered with a typical diphtheritic membrane. It was cauterized with pure phenol neutralized in a few seconds with alcohol, but culture the following day showed positive. Diphtheria antitoxin undiluted was then used as a wet dressing twice daily, but with negative results up to January 24. The wound was then treated with tincture of iodin, and cultures the 28th and 31st have been negative. The Schick test was negative.

CASE 46.—Private F. was admitted to Ward A-1 from Ward A-4, January 2, with a positive wound culture. Tincture of iodin was used daily, and on January 3 wound culture was negative; but a culture from the throat proved the patient to be a carrier, and he was transferred to another hospital for isolation.

CASE 51.—Private D. was admitted to Ward A-1, October 16, with a gunshot wound of the hip. This was one of the original twenty "negative" cases left in Ward A-1 at the beginning of quarantine. All cultures up to January 6 were negative, but on this date the culture showed positive. Dakin's solution was discontinued and the wound treated with tincture of iodin daily. January 9, the culture was negative, and all subsequent cultures have been negative.

CASE 60.—Private R. was admitted to our hospital, January 27, from another unit in the center. Wound culture on this date was positive for diphtheria. The patient was transferred to Ward A-1 from Ward B-2 and the wound dressed daily with tincture of iodin. January 31, culture was reported negative.

SUMMARY

1. In none of these wounds were there any systemic symptoms referable to diphtheria toxin. Most patients were well in every way and none showed any elevation of temperature other than what might well be explained by a large debrided wound.

2. The clinical appearance of the wounds varied. Twelve per cent. showed a gray membrane quite typical of diphtheria. About one half showed only a faint grayish discoloration of the granulating surfaces which under ordinary conditions would have passed unnoticed. About 6 per cent. looked absolutely healthy and ready for secondary closure.

3. So far as could be observed, the presence of diphtheria bacilli in the wound had no effect at all on wound healing. Wounds that were slow in healing invariably had large numbers of other organisms present. Wounds that appeared clean progressed in the ordinary way. And two wounds were positive up to the date of complete healing.

4. Forty-three patients received the Schick test. Six were positive. This is about the percentage for all adults.

5. The resistance to treatment varied greatly. In some cases diphtheria disappeared with two days' intensive treatment, while others were very resistant, as Cases 9, 15 and 43, which remained positive for forty-nine, forty-two and twenty-four days, respectively, in spite of all treatment.

6. By far the most efficient treatment has been the use of tincture of iodin. Under the most rigid asepsis the wound was cleaned with a 1 per cent. soap solution, ether and alcohol, and then painted with U. S. P. tincture of iodin, care being taken to protect the surrounding skin. Under this treatment the average duration of positive cultures was six days. Fifteen cases cleared up under forty-eight hours, and only eleven cases remained positive longer than one week.

Diphtheria antitoxin, up to four doses of 20,000 units each, was given in four cases, but had no effect in ridding the wounds of diphtheria. It was never neces-

sary to give it for its systemic protection. Diphtheria antitoxin as a wet dressing was used in two cases, but without effect.

Acetic acid, suggested as a specific, was given a thorough trial in four cases, but was also of no value.

Two wounds cauterized for a few seconds with phenol were reported positive the next day.

The Carrel-Dakin method, applied very exactly in eight cases, was a failure in six. Two of the cases cleared up within forty-eight hours, but in my opinion they would have cleared up just as quickly under the iodin treatment. In the six failures the method was used over periods of from two to three weeks each, and these wounds cleared up very promptly after the Carrel-Dakin method had been discontinued and the iodin treatment instituted. Dakin's paste was not available. Dichloramin-T had previously caused so much skin irritation in the unit that its use had been discontinued by order.

II. BACTERIOLOGIC

By Major Morris

Entering on the discussion of this series of wound diphtheria cases from the point of view of bacteriology, pathology and hygiene, let me first call attention to the fact that we are well aware that not all of our series were infected with virulent diphtheria organisms. Owing to a dearth of laboratory animals, however, it was not possible to test the offending organisms for virulence. One that we did test proved beyond the shadow of a doubt that it possessed virulence to a high degree. Our criterion in branding wounds as infected with diphtheria bacilli was based purely on cultural methods, with the resulting study of the morphologic characteristics, and to some extent the biologic. We also realize the fact that a wound might contain diphtheria bacilli and yet not necessarily be a case of wound diphtheria, any more than diphtheria bacilli found in a clinically normal throat make that a case of throat diphtheria; yet as we consider the latter a "throat carrier," so must we consider the former "wound carriers."

We called diphtheria bacilli only such organisms as showed the typical morphologic characteristics, that is, those which showed when grown for from eighteen to twenty-four hours on Loeffler's blood serum medium as slender rods of practically uniform thickness except for the "clubbing" at both extremities. The stain used was Loeffler's alkaline methylene blue, and microscopically it showed the organisms taking a blue stain throughout except at the extremities. The bodies either appeared granular (fine) or had the striped appearance so often noted. The "clubbed" ends took on a more violaceous hue and were homogeneous. Some showed a central swelling.

Let me add the following data in proof of virulence: As is noted above in this paper, from Oct. 14 to Nov. 16, 1918, six clinical throat diphtheria cases and five carriers were discovered in Ward A-1. During December, 1918, five more true throat diphtherias and four more throat carriers were found in this ward. Up to this time, or rather up to Dec. 13, 1918, we followed the routine prophylactic course for eradicating diphtheria in the hospital by repeated throat cultures for the detection of carriers, and it was always an easy matter to find a carrier in this ward for reasons that will soon become apparent. Yet the incidence of throat infection continued unabated, despite repeated culturing, quarantine, etc. The futility of the methods used is what prompted us to seek the cause elsewhere than in the throat. Accordingly, Dec. 13, 1918, all of the wounds in Ward A-1 were cultured on ordinary Loeffler's blood serum medium. Twenty-eight positive wounds were found, some of the patients having two or three positive wounds.

The following steps were at once taken: 1. Absolute quarantine of the ward was established, and by this is meant that no one was allowed to leave the ward except the ward surgeon and the nurses. Even the enlisted personnel employed in the ward were sequestered there. Food, clothing, etc., were brought to the door of the ward and left there. 2. Blankets, mattresses, pillows, bedclothing, etc., were all thoroughly sterilized, for here were materials that were undoubtedly harboring billions of the provoking organisms after coming into such intimate contact with badly infected dressings. From these infected bedclothes, etc., the organisms were carried far and wide by the hands and clothes of the patients, attendants and others. 3. Routine cultures of wounds and throats were taken both in this and in the other wards. 4. Schick tests were performed in this and other wards, but the value gained from this source was negligible. 5. Extra precautions as regards sterility of dressing instruments and dressings were taken.

Soon after the foregoing precautions were taken, the incidence of throat diphtheria fell. From Dec. 13, 1918, to Jan. 1, 1919, the record of throat diphtheria in Ward A-1 was two cases, one coming to light, Dec. 21, 1918, and the other six days later. Between Jan. 1 and Feb. 1, 1919, no cases of throat diphtheria developed in that ward, and the incidence of diphtheria throughout the entire hospital during that month was practically nil.

AN EPIDEMIC OF BRONCHOPNEUMONIA

ROENTGENOLOGIC STUDY

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During the recent epidemic of respiratory infection at this cantonment, arrangements were made to examine by screen or plate all cases of so-called influenza that were admitted to the base hospital. These examinations were undertaken because of the detection of many cases of mild bronchopneumonia during the routine examination of the chests of the draftees, of whom about 23,000 have been fluoroscopically studied for the tuberculosis board of Camp Lewis. In this study, many cases of bronchopneumonia of one or both bases were discovered. Each case was examined carefully, and each patient stated that he had been suffering with a cold for several days. Verification of the diagnosis of bronchopneumonia was obtained clinically.

So much assistance was afforded the clinician, that after a few weeks at the suggestion of Capt. Charles A. Ballard, all patients except those distinctly pneumonic were admitted to the observation ward and roentgenographed before being distributed to the different pneumonia wards. Those admitted in the evening were sent to the roentgen-ray laboratory the next day at 11 a. m. Those only slightly ill were screened, while those more seriously ill were plated. The fluoroscopic

reports were immediately returned to the observation ward. The plates were developed at once and the report was furnished in about one hour. The patients were then distributed to the various wards.

In the neighborhood of 7,000 influenza patients were subjected to roentgenographic examination. Those able to walk were screened but ill patients were brought to the roentgen-ray laboratory, well wrapped, on the hospital litter carts, and were placed on the table face down, without being allowed the least exertion. A stereoscopic set was made, for the most part gas tubes being used because they produce a plate of better detail and more contrast than does the Coolidge. Although the work proved to be more wholesale than delicate, we strived to obtain the most perfect plate, and our plates were surprisingly uniform, possessing excellent detail. The desperately ill patients were examined in the ward by means of the portable bedside unit. Exposure was made on the thin double coated film between two block screens.

Bronchopneumonia was found in some 2,200 cases. By far the larger percentage (about 80) was an involvement of one or both bases. All degrees of involvement in all combinations were found. The lobe involvements were classed as mild, moderate or severe in the different lobes. The parenchymal involvement we tabulated as:

1. Peribronchial, only the air sacs adjacent to the bronchioles being involved (capillary bronchitis?).
2. Central, apparently beginning at the hilum and extending bronchogenetically toward the periphery.
3. Confluent, involving an entire lobe and presenting a picture suggestive of lobar pneumonia.
4. Lobular, which distinctly involved the lobules.
5. Diffused, presenting one or more of the foregoing in an entire lobe, an entire lung or both lungs.

We were often able to suggest bronchopneumonia before clinical findings were obtained. This was especially true in those cases in which the involved area was small and centrally located in the body of the lobe, particularly the lower. Again, our findings were often indefinite when the clinical indications were pronounced. This occurred in those cases in which the process was posteriorly situated, especially as the area was far removed from the plate (the patient lying face down). In the very mild parenchymal involvement occuring in the capillary bronchitis, the plate showed definite indications while physical findings were minimal. Medium and coarse râles were heard, but the finer ones were not made out, especially if centrally located, until the process became more advanced. It usually did so in a few hours, and the most painstaking physical examination was necessary in many cases before the delicate change in breath sounds, the slight dulness and the finer râles of bronchopneumonia were detected.

A great many cases were examined a number of times and the process was watched, as it insidiously advanced from the small primary area to a very extensive involvement of both lungs. Every possible complication was found and studied.

In addition to the exact involvement of the lungs, we made careful observations of the heart silhouette, and its area, position and configuration. Each patient's weight, age and height was reported on the request for roentgenographic examination. The heart condition was reported, allowing for a reasonable increase or decrease in area from the average. Cardiac stimulants were often suggested to the ward surgeon because of marked increase in the cardiac silhouette area with increase in radiability, as is the case in dilatation.

Five cases presented shadows indicative of a chronic tuberculous process in addition to the bronchopneumonia. The tuberculous process presents entirely different shadows than does the bronchopneumonia. This is very obvious when both processes are seen on one plate. Streptococcus bronchopneumonia is difficult to differentiate from an active fibrous tuberculosis, particularly during the resolving stage.

In many cases showing distinct shadows indicative of bronchopneumonia, the physical findings were absolutely negative, except for bronchitis. Our findings were so pronounced that we carefully investigated these cases and determined the areas of density resulting from parenchymal exudation. These cases subsequently presented the physical findings of mild bronchopneumonia. At necropsy, about 10 per cent. of the bronchopneumonia patients had one or more areas of parenchymal hemorrhage in addition to the areas of consolidation. This suggests that probably in some cases hemorrhage into the lung tissue was the beginning of the bronchopneumonic process.

After resolution is complete, abnormal shadows persist for some time. This is particularly true in the lower quadrants, where the trunks are large. It is, however, not difficult to distinguish an active from a resolved process. In many cases the streaks of air along the course of the blood vessels (emphysematous air streaks) are distinctly seen, and although they occur in all stages of the process, they are suggestive, for the most part, of beginning resolution. The air streaks are apparently the result of air sac rupture following increased distal pressure from impingement on the bronchiole. The air released into the interstitial tissues follows along the vessels as the path of least resistance. These air streaks are often readily made out as scalloped dark streaks leading toward the hilum.

For detecting mild processes and determining the extent of the involvement, the roentgen ray is an ideal means, and should be employed in every case of respiratory infection, both in civil and in military hospitals.

Roentgenographic findings are definite in bronchopneumonia and enable the clinicians to appreciate the extent of parenchymal involvement. The degree of involvement in bronchopneumonia should receive a more careful consideration. Many cases of "colds" and bronchitis present a mild degree of bronchopneumonia.

Direct Prophylaxis of Rabies.—All the dogs in the Kanagawa district, Japan, were inoculated last year against rabies, a total of 6,644 dogs. This region is said to include two cities and six districts. During the year there were twenty cases of rabies among the dogs in September, three in November and none in December. The preceding years the incidence of rabies reached its highest point in December. The *Japan Medical World*, which reports these facts, gives the details of Umeno's method of preparing the antirabic vaccine for the purpose, and its applications in the research described by Drs. T. Kitano and K. Sukegawa, sanitary officers of the Kanawaga prefecture, Yokohama. A single inoculation apparently answered the purpose; half the dose was injected on each side of the dog. No by-effects were observed of any moment, merely an occasional transient local swelling.

A REPORT OF DIPHTHERIA AT CAMP CUSTER, MICHIGAN

FROM SEPTEMBER, 1917, TO MARCH, 1919

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At the beginning of the present war it was not altogether certain what effect the grouping of large bodies of men under military conditions would have on the incidence of diphtheria and the prevalence of diphtheria carriers. The mobilization and training during the last eighteen months of some 113,000 men at this camp has afforded an opportunity to observe locally such facts about diphtheria.

CASES OF DIPHTHERIA

From September, 1917, to March, 1919, a total of fifty-seven cases of diphtheria were admitted to the base hospital. Most cases ran extremely mild courses. Six days was the average length of time for the membrane to remain in the throat. Complications were rare. Two cases of paralysis and one of myocarditis resulted.

SUMMARY OF LABORATORY WORK ON DIPHTHERIA

Examinations for	Total Number	Found		Incidence in Hospital Attendants
		Number	Per Cent.	
Cases of diphtheria.....	.....	58	....	5
Carriers of diphtheria.....	8,236	148	1.8	25
Nonimmunes (Schick test).....	7,851	808	10.3	

One death occurred as a result of streptococcic septicemia intervening after the diphtheria was clinically ended. The localization of the exudates was as follows: tonsils, 41; pharynx, 4; pharynx and tonsil, 10; pharynx and larynx, 1; nose, 1. The average white blood count was 15,000. Six cases showed albumin, and three, casts in the urine.

About 90 per cent. of the organisms isolated showed bipolar granules. Virulence tests were made by subcutaneous injection of guinea-pigs with pure cultures of the isolated organism. Of twelve organisms so tested, five proved to be avirulent. Too much reliance is probably placed on the so-called "virulence test" for diphtheria. McCord[1] points out the possibility of variation in virulence of diphtheria strains, and Meader[2] has shown in a number of strains that marked variations occur for the same organism in subcultures in morphology, fermentation reaction and virulence.

Diphtheria in this camp has been purely a sporadic disease, evidencing none of the epidemic characteristics sometimes attributed to it. The average incidence has been 2.6 cases a month, or a little less than 0.2 per cent. of the total admissions to the base hospital. Diphtheria has not been confined to any small group of organizations or to any geographic location of the camp. On the contrary, the cases have been widely distributed. Fifty different organizations are represented in the total of fifty-seven cases admitted to the base hospital. In those instances in which more than one case of diphtheria has occurred in one organization, more than thirty days have elapsed between cases. Only one organization has had as many as three cases of diphtheria. The season of the year has apparently made no difference. In January and June, 1918, there were six cases each. In September of the same year there were seven.

CARRIERS

A great deal of care has always been exercised in the search for carriers of diphtheria. For the greater part of the time it has been a routine procedure on finding a case of diphtheria to quarantine the company to which the patient was attached until two throat cultures taken at two-day intervals could be made, and Schick tests done and read. Thus, cultures have been taken of 8,236 persons. In more than half of the instances, these were taken a second time, making a total of 13,000 cultures. In all, 148 carriers were found. This was 1.8 per cent. of the number of persons examined. The diagnosis has in all cases been purely a morphologic one.

The solid-body type of organism has been most frequently found, but those showing polar bodies have also been encountered in a considerable number of instances. Twenty-four strains recovered from these cultures were inoculated into guinea-pigs. Of these, 88 per cent. proved to be avirulent.

The occurrence of carriers in different camp organizations was relatively large in only a few instances. In one company fourteen were found, in another ten, in another seven, and in two others, six each. Twenty-five carriers have been found among the base hospital personnel. Five of these were nurses or attendants in the diphtheria wards. With the above-mentioned exceptions, the average company has furnished a little more than two carriers of diphtheria. That many of the carriers are transient hosts for the diphtheria bacillus is shown in the rapid disappearance of organisms, in most cases, after entering the hospital. This was particularly true of the organizations showing a relatively high incidence of carriers. A number of these were doubtless case contacts.

In the case of chronic carriers, to rid the throat of diphtheria bacilli often required the greatest patience and persistence. The variety of methods employed indicates the inefficacy of most of them. Sprays of dichloramin-T, Dobell's solution, neutral solution of chlorinated soda (Dakin's solution), argyrol and finally a solution of antitoxin (5,000 units to 30 c.c. of water) gave place to one another as hope in a new procedure gained force in face of failure with an old. It seemed hardly possible to reach organisms like diphtheria bacilli with sprays, however bactericidal, buried as they often are in the tonsillar crypts. On numerous occasions it has been our experience after two negative cultures to make a culture from the depths of the crypts and find the organism.

Patients and carriers were discharged after three negative cultures. A number of these were instructed to return to the laboratory after two weeks for another culture. With one exception there were no cases in which we were able again to identify the diphtheria bacillus.

Striking results have been obtained after tonsillectomy. One patient, in spite of the most vigorous throat spraying, presented diphtheria bacilli continuously in his throat in forty-eight consecutive cultures. Ton-

1. McCord, C. P.; Friedlander, A., and Walker, R. C.: Diphtheria and Diphtheria Carriers in Army Camps, J. A. M. A. **71**: 275 (July 27) 1918.
2. Meader, P. D.: Variation in the Diphtheria Group, J. Infect. Dis. **24**: 145 (Feb.) 1919.

sillectomy was done. The next three cultures were negative. Three other tonsillectomies were equally successful in patients that had presented diphtheria bacilli in their throats for forty, fifty-four and forty-six days, respectively.

Of the cases of diphtheria in the hospital, forty-eight showed 1,100 days of positive cultures, a case average of 20.9 days. Twenty-two of this number averaged much higher—from twenty-five to fifty-eight days.

Of the carriers, on the other hand, 121 had 1,421 days of positive cultures, averaging 11.7 days per case. However, many of the cases of diphtheria gave negative cultures before the expiration of two weeks, and those in which diphtheria bacilli were found after this period should be classed, for the most part, as chronic carriers.

SCHICK TESTS

Schick tests have been made at the time of culture of all persons exposed to diphtheria. In all, 7,851 have been done and 10.3 per cent. have been read as positive. This is about the recognized average incidence among naturally unprotected persons between 21 and 31 years. The usual technic in giving the test has been observed. Injections of diphtheria toxin were carefully made intracutaneously. Controls consisted of diphtheria toxin heated to 75 C. for five minutes. Readings were made at the end of forty-eight and ninety-six hours. The delayed reading was used to minimize the error from pseudoreactions.

It has been the custom to give 500 units of antitoxin prophylactically to all naturally unprotected individuals recently in contact with diphtheria. The opinion prevailed that the temporary protection afforded the susceptible individual more than compensated for the small danger of sensitization against horse serum, especially as desensitization before serum administration is now a generally recognized precautionary measure. The use of toxin-antitoxin mixture has not seemed practical on account of the time consumed in securing immunity by such a method.

SUMMARY

1. Diphtheria has not been a very prevalent disease at this camp. Of 113,000 soldiers trained here during a period of eighteen months, only fifty-seven developed this disease.

2. Of 8,236 throats of which cultures were taken, 1.8 per cent. were found to be carriers of diphtheria bacilli.

3. Of 7,851 Schick tests done, 10.3 per cent. were positive.

4. Tonsillectomy is the final and only satisfactory method of disposing of chronic diphtheria carriers.

Illiteracy Among Working Children.—The National Children's Bureau announces that in the five states where federal certificates of age are required for children going to work, among 19,546 children between 14 and 16 years of age, 5,294, or more than one fourth, could not sign their names legibly. In the five states, among 18,379 white children between the ages of 14 and 16, only 742 of them had reached the eighth grade in school; of 1,166 colored children to whom certicates were issued, only forty had reached the eighth grade. This means that 96 per cent. of white children and 97 per cent. of colored children granted certificates had not reached the eighth grade in school. In some states a work permit cannot be secured until the age of 16 unless the child has completed the eighth grade. Only 248, or 1.3 per cent., of the children certified by the Children's Bureau could have met such a requirement.

PHYSIOLOGY OF RESPIRATION IN TREATMENT OF WAR WOUNDS OF CHEST AND EMPYEMA

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Empyema is essentially a condition in which the normal physiologic processes of the lung and pleura on the affected side or sides are altered, impaired or suspended. These are replaced in part by defensive processes, namely, the emigration of leukocytes in response to the presence of pathogenic bacteria or foreign bodies; the outflow of lymph to dilute toxins and to fill spaces that were potential spaces only, in the normal organ; an increase in the blood vessels for nourishment and repair of the affected part; and round-cell infiltration to establish a direct barrier to the advance of bacterial infection and an indirect barrier to the spread of infection by immobilizing the motor mechanism through plugging its cellular spaces and lymphatic channels. This, in fact, is an inflammatory process with exactly the same characteristics as an inflammatory process in any other part of the body. Therefore, any plan for the treatment of the disease must be based on a careful consideration of the physiologic and pathologic problems involved, exactly as is done in the treatment of inflammation elsewhere.

An apparent disregard or misunderstanding of the true physiology and pathology is responsible for the disastrous high mortality mark of 84 per cent. in one army camp and an average mortality rate of 30.2 per cent. in all army camps, as was determined by the questionnaire of Feb. 21, 1918 (Empyema Commission report).[1] This unfortunate picture is further contributed to by the following statement from one camp:

> Convalescence is more than three months in duration in all cases, and not one has been found with full restoration to health. Of those finally released from the hospital, eight have been readmitted with recurrences, and not one has been able to resume a full duty status; it is very doubtful if any of these patients will become fit for the full performance of duty as a soldier within six months after operation, and the majority undoubtedly never will.

These statistics and this statement are from men of great ability as surgeons. It does not include the vast number outside the army who undertake the treatment of empyema because they are able to resect a rib, that being the sum total of the obligation on the part of the operator in many cases. Statistics are not published in any of these cases.

The best surgeons, the men who take into their work the best known physiologic and pathologic treaching, rely on these principles to obtain results: That the lungs which are inclosed in the thoracic cavity and entirely shut off from the pressure of the air from without are pressed on from within by a force of approximately 15 pounds to the square inch. The weight of the air, therefore, literally blows the lungs out to fill the interior of the chest cavity. The internal capacity of the chest is increased by the contraction of the diaphragm acting as a piston moving downward and by the contraction of the levator costarum and the external intercostal muscles pulling upward on the

1. The Empyema Commission: Cases of Empyema at Camp Lee, Va., J. A. M. A. 71: 366 (Aug. 3); 443 (Aug. 10) 1918.

ribs. The weight of the air constantly exerting its force to press the lungs against the parietal pleura is known as the intrathoracic pressure and is equal to the intrapulmonic pressure minus the elastic recoil of the lungs. Also expiration, according to this theory, is due to a diminution in the size of the thorax through the relaxation of the diaphragm and the contraction of the internal intercostals, the triangularis sterni, and the transverse thoracic muscles, pulling the ribs downward, together with the elastic recoil of the lungs, there being, also, accessory muscles causing accessory respiratory movements. This commonly accepted mechanical view of respiration, which assumes that respiration is largely a passive act, should be examined in the light of clinical facts observed in the treatment of war wounds of the chest, in the treatment of empyema cases, and in connection with physical phenomena always considered unexplainable on this theory. These clinical facts should be suggestive for further experimental work.

CLINICAL OBSERVATIONS IN WAR WOUNDS OF THE CHEST

Pierre Duval,[2] chief of all the French lung and chest surgeons, whose experience was obtained at the Somme and in many later campaigns, says that surgery of the lung is a revolution. "Dread of pneumothorax had hitherto entirely limited the field of lung surgery, but the surgery of the war has triumphantly proved the value of the old and essentially French method of inducing pneumothorax." A large thoracotomy opening is made and the lung is withdrawn and operated on just as a coil of intestine is withdrawn from the abdomen. This method is a common practice of Moynihan[3] and all the surgeons of the Allied armies when fresh wounds of the chest require treatment. Lungs operated on in this way soon resume their normal function when replaced, and the chest is closed, whether or not the air is aspirated from the chest.

In chest wounds of moderate size it is a very common occurrence to find a part of a lobe of the lung bulging out of the wound plugging the opening in the chest wall. J. K. Murphy,[4] one of the leading British surgeons, says: "Traumatic hernia of the lung may occur immediately through free openings of the thorax." Van Reeth and Vouchen, Belgian surgeons, report a case of strangulated pulmonary hernia, and they express the opinion that this condition probably appears much oftener than is recognized.

The observation of the collapse of the lung, either massive or of one or two lobes, has frequently been made. Pasteur[5] was the first to report this as due to the reflex inhibition of the diaphragm which he had observed following an abdominal operation in which the diaphragm was not injured in any way. Crymble[6] reports fifteen cases of massive collapse of the lung. These fifteen cases were due to gunshot wounds of the chest. Ten of the collapsed lungs were on the side opposite to that of the injury. Rees and Hughes[7] report a series of 140 cases of gunshot wounds of the chest. These authors state that collapse of the lung is very frequent, as it is Nature's most potent method of arresting hemorrhage. They observe, also, that it is fairly common on the side not wounded. "It is of the utmost importance to grasp the fact," says Duval, "that not only does the actual wound affect the lobe traversed, but the other lobes of the same lung may sustain partial injury, and the opposite lung may, by contracoup, be more or less seriously injured." He describes these injuries as occurring usually about the hilum and as extensive contusions with hemorrhagic infiltrations.

It is interesting to note that Landis[8] reports cases from civil practice in which collapse of the lung occurring spontaneously is almost invariably on the right side, and that most of the cases of reflex collapse of the lung from trauma in war surgery occur on the left side.

A very fundamental principle established in war surgery of the lung is the terrible fatality of wounds of the diaphragm. The patient with a lung wound has an excellent chance for recovery. He may recover with a wound of a hollow viscus even if it is not sutured. But, to quote Lockwood and Nixon,[9] "as early as the middle of July, 1916, it was realized that practically all wounds of the diaphragm left unrepaired proved fatal."

CLINICAL OBSERVATIONS IN EMPYEMA CASES

That the diaphragm is motionless on the affected side, that it has lost its arch, that it is either quite flat or arched slightly downward is a common and universal observation in empyema. In the cases under treatment in the base hospital at Camp Upton, after several days during which the entire empyema cavity had been irrigated freely and thoroughly by several quarts daily of hypertonic solution according to the formula of Thiersch, and the treatment which was first recommended to this hospital by Major Delatour, I have been remarkably impressed with the occurrence of a very sudden change in the condition of the organs. Between the times of treatment the diaphragm has assumed an upward arch, either partly or wholly obscuring the view of the cavity. It has become contractile and very irritable to pressure or touch. The lung has now for the first time expanded, so that the cavity is almost completely filled. An approximate measurement of this is taken, incidentally, all the time by the fact that the cavity holds a quantity of the irrigating solution which almost fills a large pus basin. On the morning that the lung and the diaphragm have become active, only an ounce or two of the solution is required to fill the cavity. This condition exists for from two days to about one week in acute cases in which the time for operation has been properly chosen and in which the drain has been properly placed and is of sufficient size. The drainage tubes, which from the start have been of a length just adequate to hold the chest wall apart and not to project inside, are removed because they irritate the diaphragm and are an interference to the lung expansion. No attempt is made to close the wound in any case, with the rare exception when the muscle mass, chiefly the latissimus dorsi, gapes widely and it appears that the function of

2. Duval, Pierre: War Wounds of the Lung, New York, William Wood & Co., 1918; Surgery of Gunshot Wounds of the Chest, Surg., Gynec. & Obst. **28**, No. 6.
3. Moynihan, Sir Berkley: Surgery of the Lungs, Surg., Gynec. & Obst. **25**: 605 (Dec.) 1917; Observations upon the Medical Department of British Army, Clinical Congress, 1917, Chicago.
4. Murphy, J. Keogh: Wounds of the Thorax in War, New York, Oxford University Press.
5. Pasteur: Annual oration, Med. Soc. London, May, 1911.
6. Crymble, P. T.: Gun Shot Wounds of the Chest, cited by D. N. Eisendrath in Int. Abst. of Surg. **26**: No. 5, abst. from Brit. J. Surg. **5**: 1918.
7. Rees, W. A., and Hughes, G. S.: Wounds of the Chest as Seen at an Advanced Operating Center, Lancet **1**: 55 (Jan. 12) 1918; abstr. Internat. Abst. Surg. **26**: 421 (May) 1918.
8. Norris and Landis: Diseases of the Chest, Philadelphia, W. B. Saunders Company, 1918.
9. Lockwood, A. L., and Nixon, J. A.: War Surgery of Chest, Brit. M. J.; abstr. J. A. M. A. **70**: 734 (March 9) 1918.

this muscle will be restored more quickly by uniting its cut ends and the skin over it. But the lung and the diaphragm are now thoroughly adapted to the presence of the air, with its varying temperature, and the blood within the lung reduced in quantity, since both lung and diaphragm are protected by a thick, edematous wall consisting of folds of pleura and underlying cellular tissue with abundant supply of lymph vessels; the lung continues to expand down to the open wound in the wall of the thorax (Fig. 1).

Others have noted this heretofore unsuspected sudden recurrence of lung expansion. I quote from the report of the Empyema Commission[1] at Camp Lee: "It has been surprising in several cases to note the remarkable speed with which the cavity has diminished in size or has become obliterated after sterility has been accomplished with Dakin's solution." Homans,[10] reporting a series of cases from the Peter Bent Brigham Hospital, says: "If one follows the healing of an acute empyema both clinically and in a series of stereoscopic plates, one is able to appreciate the steady and apparently resistless effect of these four favorable influences." Among these "favorable influences," he mentions the rise of the diaphragm as being always noteworthy.

A condition of vast importance in the study of lung expansion is that of double empyema. Last winter I treated two cases of this rare affection:

Case 1.—R. D., aged 19, developed an empyema two weeks after an operation for general peritonitis from ruptured gangrenous appendix. His condition was so bad during the first week of the peritonitis that hypodermoclysis was used very often over every part of both sides of the chest and flanks. His right-sided empyema occurred, whereupon it was drained under a general anesthetic. He did well for several days until he developed dyspnea and fever, and an empyema was discovered on the opposite side. We tried for several days to aspirate the pus from the unopened thorax, but it was a mixed infection of *Streptococcus hemolyticus* and *Bacillus coli*, which produced a thick, flaky pus, rendering our attempts to remove the pus by this means unsuccessful. In spite of all our fears of double pneumothorax, the chest had to be drained, because the patient was gradually but certainly losing ground. All available preparation was made to use suction apparatus in the chest wound; and a lung motor was at hand if necessity should require it. Thoracotomy, under local anesthesia, through a subperiosteal resection of the ninth rib was done, and a drainage tube with a large flange on the pleural and also on the skin side of the thoracic wall secured in the wound without air entering the pleural cavity. The ease with which this is done in the presence of a positive pressure of purulent exudate is the best proof that such a device is quite unnecessary. Respiration was not the least embarrassed but the patient was relieved, and he continued to improve with both pleural cavities open. The double empyema was cured in about two months by simple adequate drainage and without antiseptics of any kind.

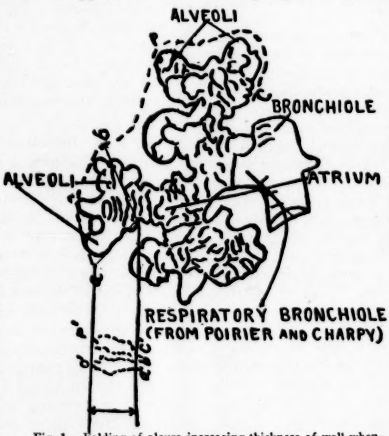

Fig. 1.—Folding of pleura increasing thickness of wall when alveolus is collapsed (copied from Gray's Anatomy). Line *a o b*, representing the pleura, is folded on itself, increasing the thickness of the pleural wall *a' o' b'* as represented in the space indicated by the arrow.

Case 2.—F. L., a boy, aged 7, presented a double pyothorax following pneumonia. The entire chest was so crowded by the fluid that it had assumed an extremely rounded shape. About a pint of thick, yellow pus was drawn from both the right and the left side of the chest the first day. This was done through a large trocar and cannula. A soft rubber catheter was slipped through the cannula and the cannula was withdrawn, leaving the catheter in place. The catheter on the right side was allowed to remain open for continuous drainage. A knot was tied in the catheter on the left side because it was feared that air might enter both sides of the chest at once with perhaps very serious results. In about a week the right thorax was opened through a subperiosteal resection of the ninth rib in the scapular line, and adequate drainage was established. Several days later an attempt was made to treat the left side in a similar manner. The roentgenogram showed a dense shadow at the level of the seventh intercostal space and below this point. It was in this space in the scapular line that the catheter had been placed. The resection of the eighth rib proved to be at the lower side of the diaphragm, but not in the peritoneal cavity. The wound was packed with antiseptic gauze and a secondary suture done in a few days, the wound in the meantime being carefully guarded against further contamination. The drainage continued through the small catheter on the left side, and both sides healed in about three months.

In each of these cases of double empyema, a double pneumothorax was established.. It may be supposed that the main pleural cavity was walled off. In the first case cited, either side could be examined with a probe and a space felt between the partially collapsed lung and the diaphragm. The second case proved to have no negative pressure in the chest, but there was a positive pressure sufficient to force pus out through catheters simultaneously from the two thoracic cavities without any suction whatever during the first treatment.

GENERALIZATIONS FROM CLINICAL EVIDENCE IN WAR WOUNDS OF THE CHEST AND IN EMPYEMA

It is more than evident that the theory of respiration which assumes that the lung is merely a passive organ in the process of expansion is inadequate to explain any of the clinical evidence that has been cited. Although negative pressure is, without doubt, one factor in the production of lung expansion in normal life, it is equally certain that the principal force in the production of lung expansion must lie in the automatic expansile power of the lung itself.

Clinical evidence supports the following generalizations:

1. Respiration is reestablished in a collapsed lung only when the movements of the diaphragm are established as rhythmic contractions.

2. The lung expands itself and forces itself into an open, large wound of the chest wall, not seldom and

10. Homans, John: The Prognosis and Treatment of Empyema, Ann. Surg. **67**: 697 (June) 1918.

accidentally, but very often and always in the presence of full atmospheric pressure opposing the protrusion toward the opening in the chest wall, and with the root of the lung pushed further laterally than normal from the open thorax wound.

3. The diaphragm is vital in the production of the respiratory reflex because wounds of the diaphragm if unrepaired always produce death even though the muscle is situated so that its contraction will make an air-tight and water-tight valve which would insure a perfect piston action. The cause must lie in a disruption of its coordinating mechanism similar to fibrillation in the heart muscle.

With this evidence from war wounds of the chest and from the behavior of the lung in recovering from empyema, we have been able to read the process backward and to make the statement that probably every case of empyema is preceded by a collapsed lung to some degree, because the lung always remains in a collapsed state until the diaphragm contracts, the contraction always initiating the respiratory cycle. Therefore, collapse of the lung due to immobilization of the diaphragm from reflex causes, such as an inflamed pleura or a plugged bronchus, and very often plus a lowered threshold of irritability from fatigue or the exhaustion of infection, is the first stage of empyema. The second stage is the pouring out of exudate to fill the dead space about the lung because a living animal organism never tolerates a dead space. This exudate is rapidly loaded with pathogenic bacteria which are present in the lungs and in the pleura before this climax was reached in the demand for physiologic rest. The leukocytes wander out in response to the stimulus of the presence of bacteria, marking the third stage in empyema. Empyema, up to this point, is a defensive process.

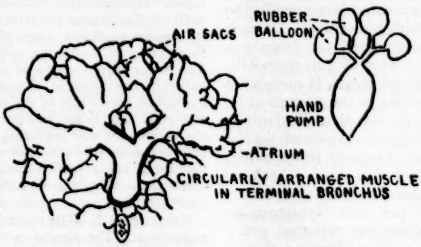

Fig. 2.—Camera lucida tracing of a 2½ year old child's lung (Miller in Bailey's Histology): heavy line, smooth muscle.

I have been delighted to find that the best kind of direct evidence has already been published supporting this conclusion which was derived from circumstantial evidence in the clinical facts already cited. Barjon,[11] chief roentgenologist of the Yale University School of Medicine, who saw this process occur under the fluoroscope, and who also recorded it with roentgenograms, thus describes it:

> It can be shown that paralysis of the diaphragm precedes effusion and that it survives its disappearance. . . . A patient was admitted to the service with a severe stitch in the side which had just appeared during the day. He was radiographed immediately and there was shown on the diseased side a very clear hemothorax; the contour of the diaphragm and the lateral culdesac were perfectly intact and there was no trace of fluid in the pleura. But the diaphragm was completely immobilized and no respiratory movement was seen, while on the opposite side it was very extensive. The next day another examination showed that the effusion was produced in the interval and that it occupied already half the hemothorax. Immobilization of the diaphragm, therefore, precedes effusion; only it is rarely that this fact can be observed, the patients ordinarily being seen only when the effusion is established.

Barjon tells us that the movements of the diaphragm do not cease in hydrothorax from Bright's disease, but that they are retained in spite of the existence of an abundant effusion. It is apparent, therefore, that there is a fourth stage in the development of empyema consisting in the invasion of the diaphragm by micro-organisms from the exudate which continues as long as they are present in the organs above. The presence of virulent bacteria in the lymphatics and the cellular spaces of the diaphragm is a stimulus for an infiltration with lymphocytes and leukocytes, thus permanently sealing and immobilizing it as long as the infection reaches it from the parts adjacent and above. This fourth stage in the development of empyema is also a defensive process.

Early operation in empyema following bronchopneumonia in which the pneumonic process has not subsided is a damaging violation of these natural defensive reactions. The diaphragm is freed from its inflammatory processes, and perhaps in a partially recovered state is stimulated to action by an open pneumothorax, with the inevitable extremes of temperature of air reaching it, as well as from physical and chemical trauma. The one case in our service in the base hospital that came to necropsy illustrates this point. At the time of operation there was a considerable amount of thin, flaky, deeply cloudy exudate about a large, boggy, resistant lung. Convalescence after operation was slow, but the temperature dropped to normal in the course of about ten days and the patient walked about the ward and felt fairly well. The pus from the empyema cavity diminished in amount, and the cavity became smaller by about one half. Suddenly one evening, the patient collapsed and developed a high temperature and rapid pulse. The next day the lung was found to be collapsed considerably more than it had been the few days just preceding the new disaster that had come to him. During the following ten days, this patient developed a general septicemia of hemolyzing streptococcus, endocarditis, glomerular nephritis, and hemorrhages into the meninges. All of these complications were probably due to the rupture of a lung abscess into the blood stream, the postmortem examination of the lung showing several small, unruptured pulmonary abscesses.

The treatment for a case like this suggests itself. The pneumonia should be treated until it has completely subsided without any meddlesome thoracentesis and until the roentgen-ray studies show that the case is ready for definite, radical surgical treatment. Thoracentesis should be done only as a final safeguard to check on roentgenographic diagnosis. Reports by Major Hamburger[12] and others make it certain that thoracentesis is by no means a harmless procedure. "In explanation of the foregoing order," he says, "it

11. Barjon, F.: Radio-Diagnosis of Pleuro-Pulmonary Affections, Yale University Press, 1918, p. 21.

12. Hamburger, W. W., and Myers, L. H.: Pneumonia and Empyema at Camp Zachary Taylor, Ky., J. A. M. A. **70**: 915 (March 30) 1918.

should be emphasized that exploratory tappings and the use of the Potain treatment is not without danger." He mentions one death from exploratory tapping, a number of cases of collapse, and several patients showing bad effects a few hours afterward. The diagnosis having been made both as to the presence of the disease and also as to the stage, which is equally important, the pleural cavity should be drained in a very thorough manner. If the condition of the lung is suggestive of unresolved pneumonia or pulmonary abscess, which cannot be safely evacuated, the lung should be immobilized and not encouraged to expand. Formerly, my idea in every case of empyema was to help the lung to expand by direct exercises causing active respiratory movements. Now, I am convinced that every lung will expand as soon as the lung and its timing-gear, the diaphragm, are in a healthy condition, and sometimes when only the diaphragm is in a fit condition to function. If the disease of these organs is eradicated, there is no fear of the condition becoming chronic, whether there is open pneumothorax or not.

The method of empyema treatment described by Morelli,[13] and by Bastianelli,[14] is well calculated to accomplish this result. The principle is to free the thoracic cavity of pus, either by good open drainage with the thoracotomy opening stoppered by inflated rubber bags, or by a closed thorax and large needles to aspirate the pus and cleanse with antiseptics. In each case, a positive pressure is maintained for from five to fifteen days or even longer. This idea of immobilizing the acutely diseased lung and pleura is merely an extension of the Forlanini method in the treatment of tuberculosis. It is needless to say that Forlanini's method is one of the real hopeful developments in the treatment of otherwise hopeless cases of tuberculosis, which is evidenced by the fact that as far back as 1913 over 1,000 cases of advanced pulmonary tuberculosis were reported with 40 per cent. symptomatic cures.[15] Now hundreds of cases are reported every year with very encouraging results, showing that a diseased lung recovers more quickly and more certainly if given physiologic rest, so admirably insisted on by Crile[16] as a basic principle in the treatment of infected and traumatic wounds of war.

One of the closed methods of the treatment of empyema, in which the pressure of the infectious bacteria-laden exudate is replaced every two hours with a cold neutral solution of chlorinated soda (Dakin's solution), secures physiologic rest of the lung with very gratifying results in some of the very early cases of the disease in which the bronchopneumonia has not subsided. The effect of the cold is well shown in recent experiments which we have carried out in relation to the cause of expansion and collapse of the lung.

ANIMAL EXPERIMENTATION AS TO THE CAUSE OF LUNG EXPANSION

Dogs were used. The work was done under local anesthesia, with morphin to keep the animal quiet and to diminish shock. Our patients operated on with a local anesthetic were not shocked or made worse in any way as a result of the operation. Collapse of the lung in war wounds and from other reflex causes has occurred. Why, therefore, should not a shockless operation on a healthy dog be done in opening his pleura without causing collapse of the lung, provided the theory of negative pressure in the thorax maintaining normal lung expansion does not hold true? As we shall see, shock is an important factor, but many other elements enter into the very complex mechanism of respiration.

EXPERIMENT 1.—A young, full grown dog of medium size was used. The operation was begun at 1:30 p. m. The area of operation was thoroughly infiltrated with 0.5 per cent. procain. A needle connected with a long glass tube was used to test the negative pressure before the pleura was opened. It was arranged to lift a column of water in the tube, but water was drawn into the pleural cavity, and the lung immediately collapsed, as was shown by the laborious breathing and the retraction of the intercostal muscles. The thorax was opened and the lung was found collapsed, and the diaphragm strongly contracted in tetany. Morphin, 2 grains, was given intramuscularly and air kept from rushing into the thorax on inspiration. The thorax was then closed. The opposite side of the pleural cavity was then opened in a similar manner after injecting 10 c.c. of a 0.5 per cent. solution of cocain into the free pleural cavity. The lung at first protruded from the wound on inspiration, but after a brief exposure to the air the diaphragm remained in tetanic contraction and the lung in its regular rhythmic time relaxed and would not contract again until the diaphragm was released from the tetany and resumed its regular rhythmic contractions, which occurred as soon as the opening in the thorax was closed by pressure of a sponge. The finger was now placed in the pleural cavity acting as a valve in the thoracic wound. The lung was observed to expand in proportion to the extent of the diaphragmatic contractions. The finger was purposely removed several times as the diaphragm was beginning to contract. The force of the contraction in this case was very violent in spite of the fact that there was a sudden inrush of air against both lung and diaphragm. The lung expanded so that it protruded from the pleural cavity.

EXPERIMENT 2.—The operation was the same as in the first experiment. The pleural cavity was filled with warm physiologic sodium chlorid solution. Respiration was carried on with the lung on the side of the opening in about half collapse. Very little embarrassment of respiration was noted in this condition. The difficulty was in keeping the pleural cavity full of the fluid because inspiration would almost empty it each time.

EXPERIMENT 3.—The operation was done the same as in Experiment 1 except that only 1 grain of morphin was given, because the animal was a female and slightly smaller in size. The wrist of a thin rubber glove, the fingers having first been cut off, was sutured to the soft tissues of the wound just below the skin and made water tight. This was filled with physiologic sodium chlorid solution of about the temperature of the animal's blood. When the pleural cavity was overfilled with the solution we had a column of the solution above the pleural opening which would rise and fall with each respiration and which could be kept at any temperature desired. When the fluid about the lung was below the temperature of the blood, the lung would either collapse or expand much less than the volume of the pleural cavity. When the temperature was raised above that of the blood, the lung expanded so that a part of the lobe remained outside of the pleural cavity in the solution in the rubber glove. It would continue this overexpansion at each inspiration and only slight movements of expiration apparently for an indefinite length of time. A cold sponge was held to the outer surface of the rubber glove so that it came close to the lung which was entirely covered with the solution. The lung was very sensitive to the change of temperature and retracted into the chest cavity and would as quickly reappear when the temperature of the water was raised slightly. All this occurred with the pressure of the air outside the lung plus the weight of the column of physiologic

13. Morelli, E.: Treatment of Pyothorax, Policlinico, Rome **24**: 1149 (Sept. 16) 1917.
14. Bastianelli, Raffeil: Treatment of Chest Wounds, with Special Reference to Pneumothorax, Surg., Gynec. & Obst. **28**: No. 1.
15. Beggs, W. N.: Induced Pneumothorax in Pulmonary Tuberculosis, Am. Rev. Tuberc. **1**: No. 9.
16. Crile, G. W.: The Restoration and Repair of Wounds of War, Surg., Gynec. & Obst. **26**: No.4.

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sodium chlorid solution about the lung. A hemostat was clamped over the opening in the rubber glove, and the opposite side of the chest was treated in a similar manner. The opposite lung behaved in a similar way with a positive pressure on both sides of the chest.

CONCLUSIONS FROM EXPERIMENTAL WORK

1. The extent of lung expansion is in direct proportion to the amplitude of the contractions of the diaphragm.

2. Collapse of the lung is a defensive reflex to preserve the normal temperature of the blood.

3. The first expansile effort on the part of the lung when the thorax is opened is a natural effort to plug the thoracic opening.

4. Both expansion and collapse, as defensive reactions, are merely exaggerated uses of the lung reactions in normal life to meet conditions of changing temperature. The adaptation to higher temperatures in normal life is made by sighing and gasping; temperatures too low call for a lessening of the respiratory movements.

The mechanism of this adaptation may be in the nerve endings of the pleura, or possibly are due to a chilling of the blood itself. It is to be remembered that all the blood in the body passes through the lungs in approximately twenty-three seconds;[17] that the thin walls of the lung constitute an excellent radiator, and that animal life cannot exist if the temperature of the blood is reduced to 68 F.[18] If such a defensive reflex were not possessed by animals, no race could survive in the natural state where the law of tooth and claw and "kultur" holds sway. The mechanism of collapse is of the utmost importance to an organ through which passes all the life blood of the entire body within a single minute. The vessels of the lung possess no other vasoconstrictor mechanism. This reaction occurs very suddenly when the stimulus is extraordinary, such as in the opposite side of the chest from that injured by a gunshot wound. Here the reflex centers are so overwhelmed by the stimuli that they send out vigorous but disorderly responses, causing the uninjured lung to contract violently against an incompressible liquid mass, causing hemorrhagic areas as described by Duval.[2]

A hint as to the mechanism of lung expansion is obtained in the study of the lungs of the new-born child. Up to the time of the first inspiration, the lungs are solid like liver; after the first inspiration the bronchioles obtain their proper shape, and the surface of the lung is studded with a few air vesicles, but the remainder retains its fleshlike appearance.[19] A further study of the condition of the newly born was made by Bouchacourt[20] by means of roentgenograms. He found that if air is forced into the child's month, instead of its having breathed spontaneously, gas is found in the stomach and lungs but not in the apexes.

The structure of the lung suggests the mechanism of its expansile power. Circularly arranged muscle always means contraction of the enclosed lumen of any hollow viscus. The larger bronchioles have this circularly arranged muscular structure, while in the smaller bronchioles it is less marked until the terminal bronchiole is reached; these have a well developed muscularis mucosae, with the blood vessels derived from the bronchial arteries a prominent feature, showing that these muscles really function as contractile tissues rather than as a mere retractile mechanism. An illustration copied from Bailey[21] (Fig. 2) suggests the inflating effect of the contraction of the muscles in the walls of the bronchioles.

Thirty-eight cases of empyema have been under treatment in the base hospital at Camp Upton, during the two and a half months' period from which this report is derived. Many of the cases have been chronic; some have become chronic in this hospital, some from other base hospitals on this side, and some from base hospitals overseas; six cases are the result of gunshot wounds of the chest. One case in which the primary operation was done during the period of this report has become chronic, and one case has ended fatally. The chronic condition was due chiefly to three causes:

1. An unresolved bronchopneumonia from *Streptococcus hemolyticus.*

2. An incision not properly placed.

3. Efforts to secure expansion of the lung at a period when collapse should have been maintained and treatment directed toward sterilizing the pleura and permitting the lung lesions to heal. Dakin's solution has been used in chronic cases to dissolve and cut away diseased and dead tissue and deposits of exudate. Dakin's solution has been used in a few very acute cases in which pressure on the lung and the application of cold are indicated to secure immobilization as well as sterilization. The hypertonic solution of boric and salicylic acid according to the formula of Thiersch has been used in all acute cases with open thorax to remove pus and all foreign material mechanically, to inhibit bacterial growth without injuring a delicate pleura, and to produce a lymph lavage according to the teaching of Sir Almroth Wright. As the solution is warm (110 F.), it is found to be the best possible stimulus for lung expansion.

The theory of respiration which attributes to the lung an active power of expansion independent of a negative pressure in the thorax is the outgrowth of a study of the many open chests exposed to view which served as a direct stimulus for investigation, but it is also based in part on the observations of the many keen-sighted clinicians in the war zone whose records have, to a limited extent, been within our reach.[22]

17. Howell: Physiology.
18. Cocks, G. N.: Experimental Studies of the Various Effects of Atmospheric Conditions Upon the Upper Respiratory Tract, New York State Com. on Ventilation, 1915.
19. Norris and Landis: Diseases of the Chest, p. 445.
20. Bouchacourt, cited by Barjon (Footnote 3).

21. Bailey: Normal Histology.
22. In addition to the references already given, the following will be found of interest:
Eggers: Gun Shot Injuries of the Lungs, Surg., Gynec. & Obst. **26**: 638 (June) 1918.
Ingraham, C. B.; Roddy, J. A., and Aronson, J. D.: A Study of Empyema Cases at Camp Doniphan, Surg., Gynec. & Obst. **27**: 554 (Dec.) 1918.
Pierry: Review of War Surgery and Medicine, **1**, No. 4, Surgeon General, W. D.

Public Health and Public Welfare in Siam.—Vice Consul Carl C. Hansen at Bangkok reports (*Commerce Reports*, Dec. 27, 1918) that public health and welfare has been advanced during the year in Siam by extending the operation of sanitary regulations to several towns in the provinces. Two American doctors are now in the Siamese sanitary service. Dr. E. M. Barnes, of the International Health Board has successfully cooperated with the Siamese health office in the control of hookworm. American medical men working in the missions, and those doing work among lepers, begun some years ago by Dr. J. W. McKean of the American mission in northern Siam, have received expressions of appreciation by the Siamese government, and contributions toward the expenses of this work have been made during the year.

Clinical Notes, Suggestions, and New Instruments

A CASE OF ACUTE STREPTOCOCCUS MENINGITIS WITH RECOVERY *

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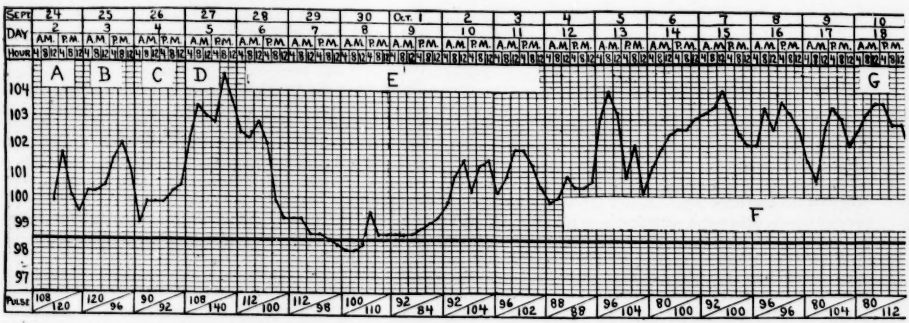
This case of meningitis is reported because instances of recovery from streptococcus meningitis are uncommon, and the case presents some other points of interest.

A woman, aged 25, was apparently in perfect health until the afternoon of Sept. 23, 1918, when she became suddenly and violently ill with headache, vomiting, and severe pain in the back of the neck and the back. At midnight a lumbar puncture was made which yielded a turbid fluid containing abundant polymorphonuclear leukocytes. No bacteria were with certainty found in smears. Twenty-seven c.c. of antimeningococcus serum were given intraspinally.

The following morning she entered Durand Hospital. She complained of intense pain in the head, back of the neck and back which was increased when she was moved. There was constant nausea, with occasional vomiting. The neck was rigid. Kernig's sign was positive; her mind was clear. The tonsils had been removed a year before. There was a slight right eyelid, and transient hallucinations. The temperature ranged from 99 to 102. September 27, the fifth day of illness, 30 c.c. of turbid fluid under increased pressure were withdrawn, and 21 c.c. of commercial polyvalent antistreptococcus serum were introduced. The temperature during the day ranged from 103 to 104, and the pulse from 108 to 140. During September 28 the temperature gradually fell to 99, and remained between 98 and 99 with a corresponding improvement in pulse, until October 2. October 2 and 3 the temperature ranged from 100 to 101.8, and the pulse from 92 to 104. From September 28 to October 3 there was a severe serum reaction with urticaria. Otherwise the patient was much better and she had little pain. Beginning with October 5 and continuing until October 11, the patient was much worse. There were severe pain in the head and the back, dizziness and blurring of vision, nausea and vomiting, hallucinations, and rambling delirium and a leukocytosis of 10,500. The temperature ranged from 101 to 104, and the pulse from 80 to 112. Lumbar puncture, October 10, obtained 22 c.c. of turbid fluid with 530 cells per cubic millimeter, mostly polymorphonuclear leukocytes. Abundant streptococci were cultivated from the fluid. October 11, a lumbar puncture was made; and after 28 c.c. of turbid fluid under increased pressure had been removed, 22 c.c. of antistreptococcus serum were introduced. During the next twenty-four hours there was a little urticaria, and the temperature fell



Temperature chart in case of acute streptococcus meningitis: *A*, lumbar puncture; 25 c.c. turbid fluid; 20 c.c. antimeningococcus serum. *B*, lumbar puncture; 33 c.c. very turbid fluid; 7,200 cells per cubic millimeter. *C*, lumbar puncture; 30 c.c. turbid fluid; *D*, lumbar puncture; 30 c.c. turbid fluid; 21 c.c. antistreptococcus serum. *E*, severe serum reaction with urticaria; otherwise, patient much better; little pain. *F*, return of pain in head and back; dizziness and blurring of vision; nausea and vomiting; hallucinations and rambling delirium. *G*, lumbar puncture; 22 c.c. turbid fluid; 530 cells per cubic millimeter. *H*, lumbar puncture; 28 c.c. turbid fluid; 650 cells per cubic millimeter; 22 c.c. antistreptococcus serum.

excess of mucus in the nasopharynx, but no acute inflammation. The temperature was 99.8 and the pulse 108. Leukocytes were 10,200, with 87 per cent. of polymorphonuclears. Nothing abnormal was found in the chest or abdomen. Lumbar puncture yielded 25 c.c. of turbid fluid under increased pressure, which contained 2,759 cells per cubic millimeter, most of them being polymorphonuclear leukocytes. No bacteria were recognized in smears, and 20 c.c. of antimeningococcus serum were given intraspinally.

Culture of the spinal fluid on blood agar plates gave a pure growth of small white colonies of a gram-positive streptococcus in moderate numbers. The colonies were surrounded by a narrow semitransparent zone of greenish color after twenty-four hours' growth in the incubator. The organisms were not bile soluble, did not ferment inulin, and were noncapsulated. They were recognized as *Streptococcus viridans*. September 25 and 26, lumbar punctures yielded 30 c.c. of turbid fluids under increased pressure containing about 7,200 cells per cubic millimeter. Abundant colonies of streptococci as described above developed on blood agar plates prepared from the fluids. The patient's condition was more grave, and there was added herpes of the lip, paresis of the

* From the Durand Hospital of the John McCormick Institute for Infectious Diseases.

below normal. From October 12 to October 17, the temperature was between 97 and 99, the pulse 72 to 84, there was very little pain, and the patient was improved in every way.

Between October 17 and October 22 there were vomiting, blurring of vision, diplopia, and spastic tremor of the eyelids. The eyes were examined by Dr. E. V. L. Brown; the disks were a trifle edematous, but there was no tortuosity of vessels nor other evidence of intracranial pressure The pupils reacted normally. Lumbar puncture, October 18, secured 14 c.c. of turbid fluid with 1,200 cells per cubic millimeter and with a moderate number of streptococci. October 19 and 20, there was violent urticaria. October 21, 25 c.c. of antistreptococcus serum were given intramuscularly. October 23, the temperature fell to 99 and never again rose above normal. From then on the recovery was rapid and complete. Repeated and thorough examinations of the ears, nose and throat by Dr. Robert Sonnenschein failed to detect any condition that might have been the focus of infection primary to the meningitis. It was suspected that the ocular symptoms from October 17 to October 22 were due in part to intracranial disturbances accompanying the serum reaction, of which a severe urticaria, October 19 and 20, was a part.

The improvement that followed each administration of antistreptococcus serum was striking. In cases of strepto-

coccus meningitis, which are usually hopeless, the combined intraspinal and intramuscular administration of antistreptococcus serum would seem to be worth trying. The curative action of antistreptococcus serum depends largely on its opsonic content,[1] as does that of antimeningococcus serum, and the serum should theoretically be useful in such a condition as meningitis, in which it can be brought in direct contact with the bacteria.

LATENT INFECTION AT THE HILUM FOLLOWING INFLUENZA

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The routine examination of the lungs of a large number of soldiers at Vancouver Barracks, a post where demobilization took place early, and where the epidemic ocurred comparatively late, showed that certain physical signs persisted at the hilum of the lungs for a considerable length of time after apparent recovery from the epidemic disease. A large proportion of these patients showed no symptoms, but occasionally one complained of cough. This finding suggested a careful investigation of the lungs of all patients evincing any symptoms of septic absorption, regardless of whether or not there was anything to suggest lung involvement. The routine examination has demonstrated that findings persist at the hilum either as an accompanying condition or as the cause of lowered resistance in a considerable number of patients. The most frequent complaint is that of prostration. Various myalgias, headache, backache, neuralgias and vague or localized joint pains are usually present; sore throat and cough are almost constant. The symptoms are those associated with some infection or with simple intestinal absorption.

They may abate temporarily after calomel and a saline purge are administered, but will recur. In another class of patients, repeated colds, sore throat or sinus trouble leads to application for a "thorough overhauling."

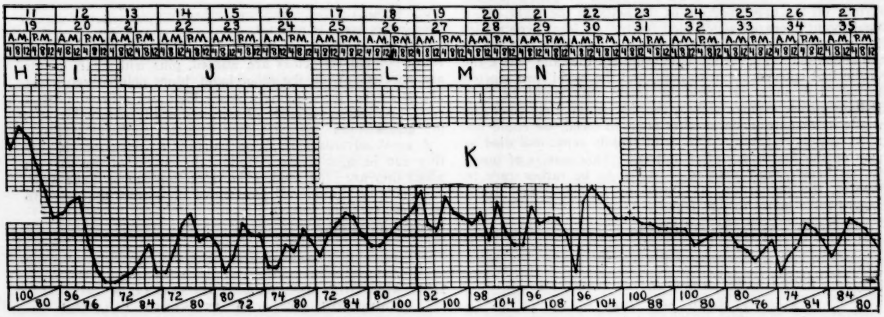
The character of the cough shows considerable variation, depending on the presence or absence of a general bronchitis or on the condition of the throat rather than on the hilum involvement. If the relaxation of the palate lets the uvula drag, the cough is paroxysmal. It may or may not be productive. Three cases occurred in persons who had undergone long treatment for sinus trouble. The patients felt greater prostration in the late afternoon sometimes accompanied by a rise in temperature.

Examination generally revealed little. The amount of redness of the throats and nasal mucous membranes varied not a little and was not always an index to the amount of subjective discomfort. Edema of the fauces, and particularly of the uvula, seemed far more general.

A superficial examination of the chest will not disclose the lesion. Inspection, palpation and percussion may demonstrate nothing but an occasional slightly increased dulness on either or both sides of the vertebral column above and below the level of the angles of the scapulae. The findings are determined by auscultation. The transmission of the voice sounds is usually unaltered, although there is sometimes an increased sense of distance and muffling. The breath sounds follow the same rule. By far the most valuable measure in this, as in cases of tuberculosis, is the employment of expiratory cough. The patient is directed to exhale and to utilize the last remnant of air in a cough sufficient to shake the chest walls, and then to inhale without undue gasping. A shower of moderately fine, sticky râles which seem to burst fairly near the ear is heard with the cough and immediately after.

The treatment by means of drugs is unsatisfactory. Mechanical measures designed to increase the flow of blood locally are of some benefit. Nothing, however, does this better than the daily use of a large, enveloping, old fashioned mustard poultice. The main reliance should be placed on such measures as are of the greatest value in cases of tuberculosis; a properly regulated diet, fresh air and, most important of all, absolute rest of mind and body. If this rest is not obtainable at home, the patient should be sent to a place where it is possible to obtain complete rest while under strict medical supervision.

The symptoms in these cases so resemble in most instances those for which we investigate sinuses, tonsils, teeth and appendixes that the possibility of chronic trouble at the hilum should be borne in mind and an examination of the back made as a routine measure, at least until the epidemic and its after-effects have become a thing of the past.



I, slight urticaria. *J*, little pain; general condition much improved; patient wants to sit up. *K*, vomiting; blurring of vision; diplopia; disks a trifle edematous, but no tortuosity of vessels nor other evidence of intracranial pressure; tremor of eyelids; pupils react normally. *L*, lumbar puncture; 14 c.c. fluid; 1,200 cells per cubic millimeter. *M*, intense urticaria. *N*, 25 c.c. antistreptococcus serum intramuscularly. Respirations the first day were 20, and remained about that rate throughout the illness.

HEMORRHAGIC DISEASE IN THE NEW-BORN

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The hemorrhagic diseases of the new-born have always been of marked interest, and it is for this reason that these two cases are reported.

CASE 1.—A boy, whose delivery had been normal after a short labor, the fourth child of healthy parents, whose personal and family histories were negative as to hemorrhage, was circumcised seven days after birth, no sutures being used, with no unusual bleeding at the time of operation, the wound being dressed with boric acid and a narrow bandage. The wound began to ooze about fifteen hours after operation,

1. Weaver, G. H., and Tunnicliff, Ruth: Further Studies of Antistreptococcus Serum, J. Infect. Dis. **9**: 130, 1911.

the bleeding coming from no particular point. The usual local hemostatics were used, but without result, so a continuous suture of 00 catgut was used to unite the skin and mucosa. This had no other effect than to cause the stitch holes to ooze. A commercial hemostatic was then used locally, with no effect. Ten c.c. of normal horse serum were then injected into the abdominal wall, and as this produced no result, another 10 c.c. were given about two hours later. This also had no effect, and Dr. William A. Steel was called in consultation. He suggested centrifuging some of the father's blood and injecting the serum, which was done, 15 c.c. being injected. The oozing stopped shortly after, and the child made an uninterrupted recovery. He is now 4 years of age, has had the usual number of cuts and bruises that an active child sustains, and has shown no further evidence of a hemorrhagic tendency.

CASE 2.—A girl, the third child of healthy parents with negative family and personal histories, was delivered by a high forceps operation. The eldest child, a girl, has a severe case of ichthyosis, and the second child, a boy, has had several minor surgical operations with no unusual bleeding. The patient exhibited no marks from the blades of the forceps except on the right cheek. There was no hemorrhage from the cord after tying. The child nursed and cried normally and showed no untoward symptoms until the third day after delivery, when there appeared on both cheeks the marks of the forceps blades. Within a few hours after these marks appeared, the skin broke down and began to ooze a pinkish serum; on the upper portion of the helix of the right ear, a small point appeared which bled freely. As local hemostatics had no effect, 10 c.c. of normal horse serum were injected in the abdominal wall. Almost immediately the hole where the needle had entered began to ooze, and the navel then started oozing; but no point could be found that could be tied. Sodium citrate enemas were given, as we felt that since the needle holes only made another point to bleed, we could not inject any more serum. The child rapidly sank, and died at noon on the fourth day after delivery. This case is of interest, as hemorrhagic disease is stated to be rather rare in females, the proportion, as stated by Campbell and Kerr, being twelve males to one female.

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RETRACTORS MADE WITH HAIRPINS

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In minor surgical operations, when special retractors are not available, ordinary hairpins may be utilized. Such retractors are effective and economical, and may be used in many ways. They can be made self-retaining by placing a weight on the end (Fig. 1 *g* and Fig. 2). In minor operations they are sometimes ideal: they can be widened or narrowed as necessary (Fig. 1 *e*, *f*) at different steps of an operation. If the incision should be widened, the points of the pin also can be proportionally widened, without resorting to a change of retractors; even in the case of certain operations when large retractors are needed, the pin can be enlarged to advantage and a second pin put between the branches of the one that has been widened (Fig. 2).

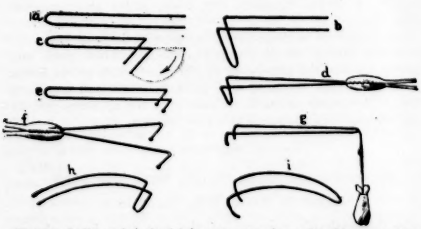

Fig. 1.—Ordinary hairpin (*a*) bent so as to form: *b*, a blunt retractor, and *c*, a hooked retractor; *d*, hairpin hold on artery forceps; *e*, hairpin having small knobs at the end and forming a blunt-pointed retractor; *f*, points more separated so as to form a wider retractor; *g*, self-retaining retractor; *h*, *i*, hairpins bent so as to follow the curve of the body.

Forceps, held by an assistant, may be attached to the side of the pin that is not bent, and by bending either the points or the top of the pin, one can obtain either a hooked or a blunt retractor. If a very strong retractor is required, hairpins used by women to curl the hair should be employed. If sharp pointed retractors are wanted, pins with sharp points are selected; if, on the other hand, blunt pointed retractors are preferred, pins having a small knob are utilized (Fig. 1 *e*, *f*). All these varieties of pins are easily obtainable at a dry goods store.

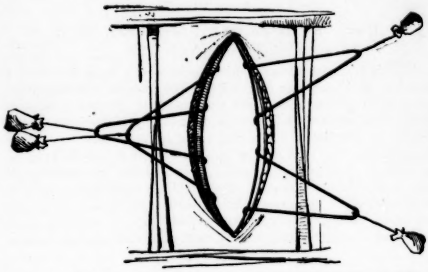

Fig. 2.—Method of applying self-retaining hairpin retractors when a large surface has to be retracted.

A great advantage of using hairpins as retractors is that they can be bent so as to follow the curves of the part on which they are used, so that the retraction can be made without changing the natural position of the tissues that have to be retracted (Fig. 1 *h*, *i*).

Ospedale Militare Principale.

THE RELATION OF THE PNEUMOCOCCUS TO THE PRODUCTION OF ACID IN FLUID CULTURE MEDIUMS AND THE REACTION OF THE PNEUMONIC LUNG*

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The pneumococcus may continue to live in plain bouillon and in calcium carbonate-glucose bouillon for a period of from three to six months. Its viability in glucose bouillon without calcium carbonate is only a few days. The acidity of a 1 per cent. glucose bouillon culture, for example, rises rapidly, as indicated by titration from an initial reading of 0.3 c.c. twentieth-normal sodium hydroxid to 3 c.c. twentieth-normal sodium hydroxid and by colorimeteric determination of the H-ion concentration from an initial reading of from 7.3 to 5.5 with death of the organisms. That an increase in the acidity is to be regarded as an important factor in the death of the organisms is suggested by the fact that the addition of calcium carbonate to the glucose bouillon before implantation of the pneumococcus maintains the life of the culture for a long period, and that after reimplantation of a real-kalinized glucose bouillon without calcium carbonate the pneumococcus again grows.

Determination of the H-ion concentration of the press juice of the exudate in lobar pneumonia by the dialysis method showed in three of four human cases a greater degree of acidity in the pneumonic exudate than in the press juice

* From the Massachusetts General Hospital. Presented at the meeting of the American Society for Clinical Investigation, Washington, D. C., May 8, 1916. Subsequent work on this subject was interrupted by the war. I am indebted to Drs. Porter, Newburgh and Means for some of the material in connection with the experimental pneumonia in dogs.

of the other lung used as a control. In the fourth case the H-ion concentration of the pneumonic lung and the other lung was the same.

The pneumonic exudate in experimental Friedländer and pneumococcus pneumonia in dogs was likewise more acid than the press juice of other organs and the blood. In one dog, with experimental pneumococcus pneumonia, the H-ion concentration of one involved lobe was 6.00, and that of another 5.40. From the former, pneumococci were grown in pure culture, but from the latter no growth of pneumococci was obtained.

An increased acidity, indicated by a determination of the H-ion concentration, may be demonstrated also in sputum obtained from patients with lobar pneumonia. It is also found, however, in the purulent sputum from other patients, in empyema pus, and pus from abscesses due to other organisms than the pneumococcus.

The pneumococcus can usually be cultivated from the exudate of lobar pneumonia, even when the acidity is high. Since, however, that part of the lung involved in lobar pneumonia is in a measure isolated from other parts of the body, it is possible to conceive of important local changes of a biochemical nature taking place within it, such as the inhibiting effect of acid production on the growth of the pneumococcus and the favoring influence of increase in acidity on enzymatic action.

305 Beacon Street.

STAINING OF BACTERIA IN TISSUES FOR BACTERIOLOGIC STUDY OF PNEUMONIC FOCI

A MODIFICATION OF METHOD, AS APPLIED ESPECIALLY TO THE PFEIFFER BACILLUS

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There are many rules and directions laid down for the staining of bacteria in tissue, especially when microphages and macrophages are concerned; but the most important requirement is that, while the cell protoplasm shall be moderately bleached, the nuclei and the bacteria shall become and remain plainly visible. Last fall a pandemic of influenza swept over Japan. In investigations undertaken to ascertain the morphology and the incidence of the bacterial phenomena, many of the staining methods did not produce the best results, but with my modification of the carbolfuchsin staining-fluid satisfactory results were achieved.

MODIFIED STAINING METHOD

1. The frozen sections should be cut as thin as possible and glued to the object glass by means of an egg-white glycerin mixture.
2. They should be stained for a period of from ten to twenty minutes in a solution of carbolfuchsin which has been prepared by dissolving 1 c.c. of carbolfuchsin in 10 c.c. of water.
3. The differentiation is accomplished by the use of weakly acidulated warm water (two drops of glacial acetic acid to about 250 c.c. of water). The sections should be left in the solution until they take on a rose-violet hue.
4. The sections are now rinsed in water.
5. They are then dried in the air, no alcohol being used.
6. They are afterward transferred to a xylene bath and are then embedded in a neutral balsam.

FINDINGS

The bacteria are stained all the way from a light to a very dark red. The nucleus takes on a deep red hue, while the protoplasm is almost colorless.

This method is adapted to the staining of any prepared sections in connection with bacteriologic study.

The Perfect Man.—The hygienic ideal continues to be the same as expressed in the Roman proverb, "mens sana in corpore sano," which as interpreted by the Spanish physician Letamendi, means the body of an athlete, the mind of a scholar, and the soul of a saint.

Special Article

HOSPITAL SERVICE IN RURAL COMMUNITIES

A PRELIMINARY REPORT

PREPARED BY ERNST C. MEYER, DIRECTOR OF THE DEPARTMENT OF SURVEYS AND EXHIBITS OF THE ROCKEFELLER FOUNDATION INTERNATIONAL HEALTH BOARD
NEW YORK

(*Continued from page 1293*)

PART III. SERVICES WHICH SMALL HOSPITALS IN RURAL COMMUNITIES CAN RENDER

Future Rôle.—The essential work of a hospital lies in the field of curative medicine. It is hardly necessary, however, to point out that to care for properly and to cure disease is also to prevent it. In fact, it is not unlikely that when the hospital has found its place of greatest usefulness in the scheme of work for health preservation, its influence as a preventive agency will overshadow even its highly important function in the curative field.

Growing the Hospital from the Hearts of the People.—All experience would seem to point to the fact that a community hospital in order to enjoy its full measure of usefulness must be grown from the hearts of the people whom it is to serve. To do this, public sentiment must as a rule be painstakingly educated. The idea of hospital service is new, and prejudice against it widespread. It is of peculiar interest that this prejudice should be greatest among those who would benefit most by the service. Wherever it was possible, through a tactful, energetic and thorough campaign to coax a community hospital from an originally indifferent, because unknowing public, the benefits have been so evident and so widely enjoyed that the hospital has invariably had warm support and has experienced constantly increasing usefulness.

A hospital is one of those institutions which is peculiarly helpless unless the public comes to it. Those who wish to establish such an institution must seek to find the right way rather than the quick way to do so. Not the grafted hospital—in the form of a private benefaction—but the home grown variety, seems to appeal the most. There is the difference between going after something that is wanted, and receiving something not thought of before. In the first instance, use and enjoyment are immediate and spontaneous. In the second, liking and desire must first be cultivated. It has been found that during this period of cultivation the hospital is apt to go through a stage of hard times both financially and medically.

Aside from these general thoughts, certain advantages of a specific character may be enumerated. They are grouped with respect to their bearing on the patient, the community and the physician.

BENEFIT TO THE PATIENT

A few illustrations of what proper hospital care means in specific types of sickness will serve as an introduction to this rather trite summary of the bright side of the community hospital.

Emergency Cases.—The usefulness of a community hospital is nowhere more apparent than in the emergency or accident cases, in which often the least delay in operating may cause fatal results. The experience of some 150 small hospitals serving largely rural communities in Pennsylvania showed that about 80 per cent. of the cases which came to these hospitals were surgical, and that from 75 to 80 per cent. of the surgical cases were in turn emergency cases. In other words, about 65 per cent. of all cases in these small hospitals fell in the emergency class.[10]

Typhoid.—Hospital care is of immense importance in the care of typhoid. The mortality rate, in the rural regions, in 1910 for this disease was 23.3 per hundred thousand. The stamping out of typhoid is one of the great current tasks of preventive medicine. Its prevalence is well recognized as a serious reflection on any community. Treatment in the hospital will mean better care, quicker discovery of complications, quicker treatment, and better disinfection. Perforation of the intestine, which annually causes 2,500 deaths in this country out of 8,000 cases, could be so handled in hospitals as to save most of this loss of life. In the country a patient with this complication is described as having "no more chance for existence than a snowball in a kettle of boiling water."

Rheumatism.—In vital statistics, rheumatism appears as an apparently insignificant cause of death—7.4 per hundred thousand population. As a matter of fact, it is said that 50 per cent. of the deaths due to organic heart disease (141.5 per hundred thousand, or greater than that of tuberculosis of the lungs, which was 139.7) in 1910 were due to rheumatism. Moreover, numerous deaths reported to be due to other causes are directly traceable to heart failure. Thus, where a case of pneumonia or typhoid is fatal, owing to a crippled heart, the acute disease is usually reported as the cause of death.

Rheumatism is one of the diseases which, it is said, should have "a watchman all the time." The life or future usefulness of a patient may depend on the early detection of heart complications. Rarely, it is said, do patients who live in the country districts and who are suffering from acute rheumatism receive the benefit of hospital care. It is of interest, too, that usually it is difficult to prevail on a patient to provide himself with suitable nursing at home, or even to tolerate watchfulness on the part of a physician.

Pneumonia.—Few diseases need closer watching at certain stages than pneumonia. Judicious and well-timed medication may tide the patient over the crisis to recovery. The cases need careful observation by nurses, and frequent attention from physicians.

Appendicitis.—A famous surgeon has said: "We should have no deaths from appendicitis, but we are having them"—about 8,000 a year for the country. Prompt medical and surgical attention and hospital care are the requisites.

Maternity Care.—One of the great functions which the community hospital may serve is to offer facilities for adequate maternity care, and incidentally to save thousands of lives of mothers and infants. No less than 15,000 mothers died from diseases and accidents incident to childbirth in 1910, and no less than 70,000 deaths occurred from premature birth and diseases peculiar to early infancy. Authorities seem to agree that these deaths are largely preventable. Nor do the cold figures reveal the whole sorrowful story. Garrigues has strikingly stated one aspect of this problem: "The poorest, the dirtiest, the most dissolute women are safely confined in a hospital; the richest, the youngest, the purest, and the loveliest sometimes succumb in giving birth to a child at their own homes."

Infectious Diseases in General.—The importance of an isolation ward in a community hospital is obvious. Failure properly to isolate a patient may result in an entire community's becoming infected. In no case is the need of a hospital more apparent.

Advantages of Good Medical Care.—Patients treated in a properly equipped local hospital generally are assured of good medical care. They are in the hands of trained nurses and subject to constant supervision—important in many diseases of a fluctuating character. The hospital always furnishes appliances superior to those that can be obtained in the best home. It should be in a position to meet any unforeseen developments that may arise.

Suitable Food and Surroundings.—In many cases the patient cannot at home be provided with proper food which, even if prepared by a trained nurse, is not likely to come up to hospital requirements, where the diet is a departmental matter. The general accommodations, moreover, and quiet surroundings are another factor which greatly contributes to the speedy convalesence of a hospital-treated patient.

Better Air.—Although this may not apply to the wealthier members of the community, the poor patients certainly breathe purer air in the hospital than at home. Besides being spaciously constructed, the hospital usually occupies an isolated position, surrounded by trees, and provided with open-air verandas and balconies where patients may enjoy the full benefits of convalescence.

Family Relieved of Care of Patient.—The fact that the burden of responsibility in caring for the patient is shifted from the family—usually poor and hard-working—to the hospital has a salutary effect both on the patient and his family, and by reducing the inevitable worry which accompanies all sickness, facilitates a more speedy recovery.

Reduction of Expenditure.—Another recommendation in the eyes of the poor is the fact that while receiving better care, their expenses are lowered by being treated in the hospital; the indigent poor are, of course, relieved of all financial obligations.

Educational Work.—While in the hospital a patient acquires the fundamentals of healthy living and medical care. On his return home he is more competent to look after himself and his family.

Advantages of Community Hospital over City Hospital.—In many cases the needs of a country patient can be successfully met by the city hospital, where he is furthermore assured of receiving the best attention. Very often, however, the distant hospital is unable to be of any assistance, and the simpler, less highly organized service of the local hospital can alone avail. The

10. This fact only serves to emphasize the tragedy of hospital service in rural communities in Pennsylvania. According to the published reports of the state, 75 per cent. of these hospitals are "incompletely equipped and grossly mismanaged."

following are the main advantages of the community hospital over the city hospital:

Avoidance of Transportation: In some cases a patient would suffer very severely through delay in transportation to a city. This is especially true in surgical cases. In remote country districts, moreover, the facilities for transportation are either entirely lacking or are exceedingly primitive in character. Often the patient has to be taken for 50 or 60 miles over rough roads in a poor conveyance. The presence of a hospital in the immediate community would eliminate this difficulty.

Expense: Both the distance of transportation and the superior equipment offered by a city hospital make it more expensive than the rural hospital. For the majority of country people this is a factor of importance.

Follow-Up Work: Very often it is highly important that a case be followed up after the patient is discharged. He may be too ignorant to care for himself, or his case may need constant supervision at the hands of the physician who has treated him. This can be carried out effectively only if the patient lives in the same locality in which the hospital is situated. The work of the visiting nurse is furthermore a great factor in educating the patient in everything pertaining to his physical well-being.

Individual Attention: Although from a medical point of view this may be a minor consideration, nevertheless from the subjective view of the sick patient the local hospital offers large advantages over the city institution, in that he is much more likely to be treated as a human being instead of as a mere "case." He enters into personal relations with the hospital staff who, he feels, are anxious to see him recover. And he is apt to leave the hospital full of gratitude and affection, this sentiment being quickly communicated to his family and neighbors. Too often the very opposite is true of the large city hospitals, even when the patient may have received the best professional care. The importance of this psychologic factor is happily becoming more widely recognized.

BENEFIT TO THE COMMUNITY

Community Responsibility.—The possession of a local hospital tends to arouse a community to a sense of its responsibility toward its sick. The public is too much inclined to rely on public charity and occasional donations to relieve it of this burden. It should be made to realize that the sick need its continuous support just as much as does any other department of public service, and that by looking after its sick it is serving its own immediate interests.

Educational Value.—The hospital, being in close touch with the people, can do effective work in educating the people in matters pertaining to healthful living. Every patient who enters a hospital is taught the elements of right living and of medical self-help. The lessons thus learned are spread throughout the community.

Reduction in Mortality and Morbidity.—Many deaths are averted through more prompt and adequate medical assistance furnished by the hospital. General health education increases healthful living. Communities owning rural hospitals have experienced a reduction in mortality and morbidity.

Cooperation in Public Health.—The hospital can be made an active collaborator of the public health department. It may serve as an intermediary between it and the community at large, with which it is in intimate touch. Through a well-developed system of visiting nurses it will be able not only to care for its patients but also to carry on a very active educational propaganda in the interests of sanitation and the control of epidemics. Thus results can be accomplished which quantities of leaflets spread among a population including the illiterate and ignorant cannot possibly effect.

Branch Laboratory.—The community hospital, if it is equipped with a laboratory, as it should be, both pathologic and bacteriologic, might develop into an important branch of the state laboratory service, where diagnostic work may be quickly done. Time, in many instances, is a vital factor in preventive health work. Specimens may likewise, when necessary, be forwarded to the state laboratory in prescribed form. The local laboratory may naturally also become a seat for more or less stimulating and practical research work.

BENEFIT TO THE MEDICAL PROFESSION

Hospital as Meeting Place.—The local hospital can serve as a center where the physicians of the community may gather, exchange opinions, and familiarize themselves with the latest advances in medical and hospital methods. It stimulates healthy competition and eliminates the rivalries and misunderstandings which too often result from isolated activity.

Stimulates Study.—Altogether too frequently it happens that a physician relegated to a rural district becomes a fossil. Unless animated by high ambition he may be inclined to let himself drop to the level of his surroundings, and not being subject to supervision, and usually inadequately paid, he tends to relax his standards. The presence of a community hospital acts as a very potent spur to a country practitioner's activities, and usually prompts him to endeavor to keep abreast of the times by taking postgraduate courses in medicine and in other ways. This desire is further stimulated if the hospital offers him the advantage of an up-to-date medical library.

Increases Efficiency.—The hospital greatly increases a physician's ability to render efficient service in accordance with modern standards. Proper facilities, especially in surgical cases, are not available in the ordinary country home. Usually a physician cannot maintain his own hospital. The community hospital provides a place to which he can bring surgical and other cases which need constant supervision, and which in the absence of a hospital he often must take to his own home. The presence of a hospital also lessens the physician's chance of contracting an infection, and saves both time and money.

Tends to Elevate Moral Standards.—Hospital practice is apt to discover and expose crime and graft in the form of unnecessary operations, wrong diagnosis for the sake of prolonging treatment, unwarranted division of fees, etc. It has been suggested that under such conditions great surgeons will become greater, and good physicians and surgeons better; that the poor, careless, indifferent few who endanger society, and who are the curse of reputable medical men, will be driven out of the profession.

(*To be continued*)

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SATURDAY, MAY 10, 1919

THE MEDICAL MANUAL OF THE AIR SERVICE

When the history of the great war through which the United States has just passed is fully recorded, the influence of the unusual problems, suddenly created by the requirements of the fighting forces, on the progress of scientific study will become conspicuous. One need not go beyond the medical and closely related sciences to realize the significance of this statement. Feeding an army of millions instead of thousands of persons raised anew many questions of food and nutrition which had either been overlooked or complacently disregarded under the ancient regimen. The importance of avoiding waste loomed larger than ever before at a time when we were being exhorted to conserve food to the utmost and to use substitutes so that those less able to do without certain food products might share our surplus in larger measure. Sanitary science and practical hygiene were confronted with new difficulties in the creation of great cantonments and camps, and the introduction of new modes of warfare, such as trench fighting. Water supply and sewage disposal required suitable provision on an enormous scale, often in places presenting unanticipated difficulties. Accordingly, the organization of a large sanitary corps, the initiation of a food division, the introduction of the designation "nutrition officer," are illustrations of a few of the innovations created by the novel needs of the times.

In medical fields the almost revolutionary changes in methods and principles of diagnostic, therapeutic and prophylactic procedure are still too new to leave the impression of importance which some of their unique aspects deserve. It was a platitude that, in war, more men die of disease than by bullets; but just as the implements of war change in successive generations, so the incidence of army maladies varies in different places and seasons. No sooner had the prophylactic conquest of typhoid, once a dreaded sourge, relieved the army command of one enormous danger, than typhus, trench fever, meningitis, pneumonia and influenza came on the scene in unanticipated ways and with unexpected virulence. Other omnipresent deteriorating forces, like the venereal diseases, adopted unsuspected modes of insidious attack calling for the utmost resourcefulness to prevent serious human disaster. The ravage caused by the war gases presented absolute novelties of pressing necessity to the medical fraternity, bringing it face to face, literally overnight, with pathologic manifestations never encountered before.

The fruitfulness of medical research in the solution, partial or complete, of the seemingly innumerable new difficulties that have confronted it in the past two or three years has manifested itself in so many abiding ways that it is not easy to select the most representative examples. Despite the perennial interest that centers in such topics as shock, infectious disease or plastic surgery, they do not possess the temporarily popular fascination which the novel experiences of gas warfare or aviation present as scientific curiosities. Medical studies in aviation have more than merely military value: they involve matters likewise of economic and human import. Colonel Wilmer, who has been the officer in charge of the Medical Research Laboratory of the Air Service at Mineola, L. I., has forcefully indicated the point of view emphasized by war time needs. Though the principles of aeronautics, he writes,[1] were clearly enunciated by Samuel Johnson 159 years ago in his "Rasselas, Prince of Abyssinia," it was not until within the last decade that air flights began to be practical. During these years, infinite time and thought have been spent on the machine. The pitch of the screw, the angle of attack, the stream line, the admixture of gasoline and air, etc., have all been studied with mathematical accuracy. But the value of the human machine, Wilmer adds, is just beginning to be properly recognized. A slack control wire is not more dangerous than a weak eye muscle; a poor mixture of gas and air is not more serious than a flier with poor adaptive respiration. And a poor compression in the cylinder is not of such vital consequence as a weak heart muscle.

The new air service has thus been faced with the physiologic problem of determining the conditions which may affect the efficiency of the aviator, and the medical problem of protecting him against the effects of altitude, low barometric pressure, and deficiency of oxygen. Some of the timely contributions from the newly created laboratory have already been reviewed in THE JOURNAL.[2] More recently the government has issued a manual of the Medical Research Laboratory[1] from the Division of Military Aeronautics in the War Department. It is the result of the work done in the well equipped laboratory at Mineola, and is intended for the information and instruction of those who are interested in the medical problems of aviation. In addition to an illuminating discussion of the physiology of altitude which concerns the mountain climber as

1. Manual of Medical Research Laboratory, War Department, Air Service, Division of Military Aeronautics, Washington, D. C., 1918, p. 5.

2. Medical Studies in Aviation, J. A. M. A. 71: 1382 (Oct. 26) 1918. Medical Aspects of Aviation, editorial, ibid. p. 1408.

well as the air pilot, the peculiar concern of psychology, otology, ophthalmology and psychiatry in the conditions involved in flying is interpreted.

Few persons not primarily accustomed to think of the factors involved in human efficiency realize what individual physical fitness really means. Why do we read of so many "ologies" in relation to the aviator? The ability to endure comfortably and well high altitudes, the government manual tells us, is dependent on the ease and quickness with which the adaptive responses in the breathing, the blood and the circulation take place. In persons damaged by disease, overwork or unhygienic living, or weakened by inactivity and by loss of sleep, the power of adjustment is as a rule below par. The normal equilibrium of the body is so nicely adjusted that under usual conditions the physiologic balance is largely maintained by adjustments that are made with little or no expenditure of energy.

There is a certain range of greater or less breadth through which the external factors of the environment may be varied and yet be met by an automatic adjustment of the physiologic processes in the body which will preserve the vital balance of the mechanism. The eyes, ears, cardiovascular mechanism and nervous system play a part in these adjustments. Until the effects of the airman's activities and environment on the functions of different organs are accurately known, the health and the efficiency of the aviator cannot be completely safeguarded. The new manual is a sign of the stamina of American men of science acting in united effort under the spur of a great need.

HAND-BORNE INFECTIONS

It is easy for the absent-minded, as well as for the ignorant person, to transfer germs from contaminated hands to the mouth. Objects touched by fingers just moistened with saliva are a part of the everyday environment of many persons in modern life. Telephone directories consulted with freshly dampened thumbs, saliva-moistened street-car transfers, and hands offered for the ceremonial shaking after being used for smothering the droplets of a cough are but a few of the multitude of opportunities for acquiring germs fresh from the respiratory tracts of friends, acquaintances and strangers. Others will be recalled by every observant city dweller. Opportunities, indeed, for hand-soiling of even more unpleasant character are not far to seek.

The chances for hand contamination during an active day are extraordinarily numerous. Palmer[1] has recently enumerated his chances for acquiring infection of this sort; they amounted to 119 points of contact. The majority of them were instances of hand contact with doorknobs and similar objects that were or might have been touched by others immediately before. Many active men would probably go far beyond such numbers in counting over their own possible daily chances for hand contamination. It is safe to say that the average professional man or office worker in the "down town" or "business" district of a city takes advantage in the course of a day of several hundred opportunities for picking up germs of various kinds recently deposited by the hands of others. Under special conditions, this form of indirect contact has been thought to be a potent factor in definite epidemics of diseases. Lynch and Cumming[2] have advanced evidence which is interesting, if not altogether convincing, in support of the view that contaminated hands were an important agency in spreading influenza in certain army organizations during the great 1918 pandemic. The hands of typhoid carriers have for a long time been regarded with well merited suspicion.

There are two aspects of hand-borne infection that deserve special recognition. One is the fact that early education of the reflexes can protect the individual to a large extent against the grosser forms of this mode of infection. It is glaringly obvious that the biting of finger-nails, the moistening of fingers in turning the pages of a book, and similar half unconscious acts greatly enhance the opportunities for planting undesirable germs where they can multiply. On the fingers they may be harmless; transferred to the mouth they have a wide field for development. It is plain, too, that hand washing before meals constitutes a safeguard against infection. The soiling of the hands is impossible to avoid altogether, but the swallowing of germs from one's own soiled hands is largely under individual control. A reasonable degree of education in such matters in the home and in the school will go a long way toward minimizing the dangers of hand-borne infection.

Another aspect is the evident absence of any ground for extreme apprehension or for the building up of a phobia. Every normal, active person must receive on his hands hundreds of times a day germs derived from other human beings, and yet apparently infection from this source is relatively uncommon. In proportion to the chances for hand contamination, adult infection is certainly a rare occurrence. Undoubtedly in children of school age and younger this route of infection is more commonly followed; but two additional factors are at work in the latter case; the greater susceptibility of children to the common infections whose portal is the mouth or the nose, and the more unconventional habits of children with respect to cleanliness of hands and familiarity of intercourse between fingers and mouth. Even with children, however, it is difficult to apportion the relative responsibility of hand-borne infection and droplet infection.

1. Palmer: Am. J. Pub. Health **9**: 267 (April) 1919.

2. Lynch and Cumming: J. Am. Pub. Health Assn. p. 25 (Jan.) 1919.

So far as adults are concerned, the proportion of cases of hand-borne infection to the opportunities for such infection seem almost surprisingly small. It may be fairly assumed that the most useful safeguards against this form of disease transmission are to be found in such practices as hand-washing and in refraining from using the tongue or the lips as a moistening-pad, rather than in hysterical attempts at avoidance of all hand contamination. Children are best protected through the inculcation of similar desirable habits at an early age. In a word, some degree of hand contamination is unavoidable; but the transference of the contaminating germs to the mouth is largely under individual control and is subject to the powerful influence of early formed habit.

FOOD AND THE CONTROL OF BACTERIA IN THE INTESTINE

The alimentary tract of man has been designated as a graveyard for bacteria. No less than from 5 to 8 grams of them, dead for the most part, are excreted every day with the feces. One need not debate whether these micro-organisms are in general beneficent or detrimental to the body. Certainly at times some of them, at least, produce more harm than good. Early in the history of modern alimentary bacteriology the attempt was frequently made to devise some procedure for sterilizing the gastro-intestinal tract by destroying those bacteria which escape the germicidal bath of the acid gastric juice. The efforts resulted in failure. Such substances as might have been effective bactericides were as a rule so detrimental to the human host that it became a choice between survival of both the latter and his invader or the simultaneous destruction of the two.

Subsequently it became apparent that the intestine may be the location of quite different types of bacteria. One group, which may be designated as the putrefactive class, thrives particularly in the large intestine, where the reaction is not unfavorable. Where the second group, the fermentative bacteria, thrives, acid conditions are likely to arise which inhibit the growth of the putrefactive micro-organisms. Still other varieties like *B. coli,* are adjustable to varied conditions of environment. Herter and Kendall[1] were the first to emphasize the correlation between the types of bacteria found in the intestine and the composition of the ingested food. According to them, in the absence of carbohydrates in the diet the proteolytic bacteria predominate, so that the fecal discharges give evidence of the products of the putrefactive changes brought about by them.

Other American bacteriologists have also recorded the transforming influence exerted by certain foodstuffs on the intestinal flora. For example, Torrey[2] observed the peculiar effects of high-calory diets on the fecal micro-organisms of typhoid patients. The food fuel in such cases contains an unusual quantity of lactose, amounting at times to 250 grams and upward. On such a regimen there resulted a transformation of the ordinary type of flora to one strongly dominated by *Bacillus acidophilus.* More recently, at the Cornell University Medical College, New York, Torrey[3] has demonstrated anew, by experiments on dogs, that the chemical character of the food ingested is the factor controlling the types of bacteria vegetating in the alimentary tract. It does not follow, however, that all carbohydrates have an equal tendency to establish a purely fermentative intestinal flora; nor do all protein foods encourage putrefactive conditions in like degree. Torrey observed that two carbohydrates, lactose and dextrin, added to a diet of meat and rice, caused such a marked development of aciduric bacteria of the *Bacillus acidophilus* type that they completely dominated the fecal flora and effected the almost complete suppression of proteolytic types, even including *B. coli,* commonly found in the dog's intestinal tract. Glucose exercised no transforming influence; and maltose and sucrose caused at most only a minor alteration in the direction referred to. Whether this is due to a slower absorption of lactose so that it can act as a bacterial medium, owing to a longer sojourn in the lumen of the intestine, is not determined. At any rate, the results are more than transitory: they persist as long as the special diet is continued.

Starchy foods also tended to effect a simplification of the intestinal flora and an elimination of the obligate putrefactive bacteria. Protein foods produced decidedly unlike effects, so far as the encouragement of putrefactive organisms is concerned. Thus, milk casein in the diet exhibited far less tendency to give rise to putrefaction than did meat protein—a fact long since recognized on the basis of chemical examination of the urine for evidences of absorbed decomposition products. Fats in the diet seem in general to be without determining influence. Torrey announces that vegetable proteins stand in strong contrast to proteins of animal origin, and meat in particular, in that they do not offer encouragement to the growth of intestinal putrefactive types of bacteria. We shall expect our vegetarian friends to disseminate this fact widely in their always vigorous admonitions against the "dangers" of meat, now that the "uric acid poison" proclamations are no longer so effective as formerly. We shall not participate at this moment in the debate of bread and milk versus meat and potatoes. For the present it is gratifying enough to know that where antiseptics fail to produce desired results, as in the hidden recesses of the bowel, diet may prove to be an unexpectedly potent factor in the purposeful restraint of undesirable inhabitants.

1. Herter, C. A., and Kendall, A. I.: J. Biol. Chem. **7**: 203, 1910.
2. Torrey, J. C.: J. Infect. Dis. **16**: 72, 1915.
3. Torrey, J. C.: The Regulation of the Intestinal Flora of Dogs Through Diet, J. M. Res. **39**: 415, 1919.

V. 191

THE EPIDEMIOLOGY OF POLIOMYELITIS

The increasing knowledge of the distribution of the micro-organisms that are the etiologic agents in the occurrence of several epidemic diseases has focused attention on the prevalence of carriers, formerly unsuspected as factors of danger to the environment in which they exist. The demonstration that apparently healthy persons may harbor bacteria of a pathogenic sort is now accepted universally in the case of the organisms responsible for typhoid fever and diphtheria. Healthy carriers are by no means always immune to the germs which they innocently harbor, as the experience with hemolytic streptococci, responsible for the secondary infections following in the wake of scarlet fever, measles, smallpox and influenza, clearly indicates.[1]

It is not doubted at present that there are healthy carriers of the virus of poliomyelitis, regarding the epidemiology of which much remains to be ascertained. The virus has been detected in the secretions of the nasopharynx not only during the period of attack by the disease but also in healthy persons who have been in contact with cases of poliomyelitis.[2] Obviously an intelligent method of control of the spread of an epidemic presupposes dependable information regarding the distribution of the etiologic agent. Swedish observers[3] have championed the view that chronic carriage of the virus of poliomyelitis is common; but the painstaking critical and experimental studies just reported from the Laboratories of the Rockefeller Institute for Medical Research by Flexner and Amoss[4] are not in accord with this conclusion. Their deductions are to the effect that the virus is regularly present in the nasopharynx in cases of poliomyelitis in the first days of illness, and especially in fatal cases; that it diminishes relatively quickly as the disease progresses, except in rare instances; and that it is unusual for a carrier state to be developed. Hence the period of greatest infectivity of patients would appear to be early in the disease, which is probably the time at which communication of the virus from person to person takes place.

The American investigators adduce, in support of their conclusion, the observation that the communicability of poliomyelitis during the wide epidemic in this country in the summer and autumn of 1916 was a phenomenon chiefly of the early stages, while the frankly paralyzed person and the convalescent were to be feared much less. Correspondingly, at the Rockefeller Institute experimental infection was secured with tissues obtained during the first week, approximately, of the disease, but not at later periods. It seems unlikely, therefore, that healthy and chronic carriers of the virus are numerous. In any event, preventive measures against the spread of epidemic poliomyelitis should unquestionably be centered on the actual patients and particularly early in the course of their infection.

1. Hemolytic Streptococci and the Tonsils, editorial, J. A. M. A. **72**: 1295 (May 3) 1919.
2. Flexner, Simon; Clark, P. F., and Fraser, F. R.: Epidemic Poliomyelitis, J. A. M. A. **60**: 201 (Jan. 18) 1913. Kling, C., and Pettersson, H.: Deutsch. med. Wchnschr. **40**: 320, 1914. Taylor, E., and Amoss, H. L.: J. Exper. Med. **26**: 745 (Nov.) 1917.
3. Kling, C.; Pettersson, A., and Wernstedt, W.: Communications Sweden State Med. Inst., Stockholm **3**: 4, 1912.
4. Flexner, Simon, and Amoss, H. L.: Persistence of the Virus of Poliomyelitis in the Nasopharynx, J. Exper. Med. **29**: 379 (April) 1919.

Current Comment

CONSTITUTIONALITY OF HARRISON NARCOTIC DRUG ACT UPHELD BY SUPREME COURT

The United States Supreme Court has decided that the Harrison Narcotic Drug Act is constitutional. The exact status of this law has been a matter of discussion since its passage. While it had been variously interpreted by United States district and appellate courts, its constitutionality had never been passed on by the United States Supreme Court. In two decisions, involving practically the same points, the Federal Supreme Court holds the act constitutional and rejects the claim that it is an invasion of the police power reserved to the states. In the first case, United States vs. Doremus, the district court of the western district of Texas held the act unconstitutional on the ground that it was not a revenue measure and was an invasion of the police power of the states. The evidence shows that Doremus, a physician who was duly registered and who had paid the tax required by the act, sold to a patient, a morphin habitué, 500 one-sixth grain tablets of heroin, the sale not being in pursuance of a written order on one of the forms furnished by the Internal Revenue Department. The court says that the Harrison law was passed under article 1, section 8, of the constitution, which gives congress the power to lay and collect taxes for the general welfare, and that the only limitation placed on the power of congress is that such taxes must be uniform. To this limitation the Supreme Court declares that it cannot add others. Subject to such limitation, congress may select the subjects of taxation and may exercise the power conferred at its discretion. The fact that other motives may impel the exercise of federal taxing power does not authorize the courts to inquire into that subject. If the legislation enacted has some reasonable relation to the exercise of the taxing authority conferred by the constitution, it cannot be invalidated because of the supposed motives which induced it. Nor is it sufficient to invalidate the taxing authority given to congress by the constitution that the same business may be regulated by the police power of the state. An act may not be declared unconstitutional because its effect may be to accomplish another purpose as well as the raising of revenue. If the legislation is within the taxing authority of congress, that is sufficient to sustain it. This means that so long as an act is in proper form as a tax measure, congress may regulate anything that it may desire through its tax-levying power without regard to whether the subject is one that may be regulated by the states or whether the real object of the act may be reformatory or restrictive rather than revenue producing. So long as

the law is a tax-levying law in proper form, the courts will not go into the motive for which the act was passed. Evidently this decision represents the opinion of a bare majority of the court, since it is signed by only five justices, the chief justice and three other members of the court dissenting and holding that the district court correctly held the act to be beyond the constitutional power of congress in that it was an attempt by congress to assert a power not delegated, that is, the reserved police power of the states. Chief Justice White and Justices McKenna, Van Devanter and McReynolds, the dissenting justices, evidently regard the Harrison act as an invasion of the police power of the states and not a proper subject for federal legislation. The decision was written by Mr. Justice Holmes, and the justices concurring are Day, Pitney, Brandeis and Clarke. The second case, Webb and Goldbaum versus the United States, involves the same issue. On this, as on the previous decision, the court was divided five to four.

VICTORY WEEK IN ATLANTIC CITY

The Chicago session of the American Medical Associaton was called a war meeting. The Atlantic City session will also be a war meeting, but with a very different point of view from that of last year. This is to be a VICTORY MEETING. War is an expensive but a practical teacher. In its crucible medical science has been put to the test and vital knowledge evolved. The therapeutics and diagnostic methods of peace times are, in war's stern trial, stripped of their fripperies and fringes, and proven facts and true scientific knowledge take their place. The VICTORY MEETING of the Association will be largely devoted to the presentation of what science has gained and what facts have been gleaned in the war. Necessarily, as was the meeting last year, this VICTORY MEETING must be more or less international in character, hence invitations have been sent to foreign governments to send representatives to be present and to contribute their knowledge to this vast symposium. A prominent feature will be the application to industrial life of those war methods which are particularly applicable because they deal with the handling of large bodies of men under control, and because they deal with injuries which are duplicated by those in industrial life. Then, too, this VICTORY MEETING will offer one of the first real opportunities for a study of the havoc wrought by the influenza epidemic and the means for combating future scourges of similar character. By June ninth many medical officers—perhaps more than 20,000—will have been released from military service. Thus there will be the opportunity to meet and greet the friends of military life and to reminisce over the stirring trials of war times, whether in camp, in field service, in the laboratory or in the administrative offices. It is not too much to say that the victory meeting will be an epoch making session. In view of the important and serious discussions to take place, the Fellows of the Association are especially to be congratulated that the meeting occurs in Atlantic City where ocean breezes, balmy sunshine and invigorating and soothing ocean baths keep the mental faculties eternally fresh.

HELPFUL HINTS FOR BUSY DOCTORS

A comparatively recent issue of the *International Journal of Surgery* had an editorial on "The Questionable Etiology of the Present Epidemic." The editorial, which occupied nearly two columns, was signed "G. H. Sherman, M.D." and its sum and substance was to the effect that one can best immunize against influenza by using "a combined vaccine containing the influenza bacillus, pneumococci, streptococci, the micrococcus catarrhalis and staphylococci." In the advertising pages of the same issue was a half-page advertisement of "Influenza Vaccine No. 38" which "Will abort Colds, Grippe, Influenza and Pneumonia" and which is made by "G. H. Sherman, M.D." This vaccine contains the various bacilli and cocci mentioned in the G. H. Sherman, M.D., editorial. In the good old days, some medical journals published editorials puffing proprietary remedies. Then, however, the editorials were unsigned, being rewritten by the editor from material furnished by the advertiser. Twentieth century efficiency has improved on the old re-write method. One wonders whether in coming issues of the *International Journal of Surgery*, one may look for an editorial by Bell & Co. (which also carries a half-page advertisement) on "The Questionable Etiology of Sick Headache," which we learn from the advertising pages "is quickly and surely relieved by six Bell-ans in a glass of hot water." Or possibly one may find "The Questionable Etiology of Chronic Intestinal Stasis" discussed editorially by the French Lick Springs Hotel Co., who surely should be accorded two columns of editorial space, as they carry two quarter-page advertisements of "Pluto." A four-page editorial is rightly due the Etna Chemical Co. for its full-page advertisement of "Phenalgin," and it should not be difficult to use that amount of space in discussing "The Questionable Etiology of Pain." Interesting editorial subjects suggest themselves as one reads the advertisements of "Sal Hepatica," "Ergoapiol," "Pond's Extract," "Micajah's Suppositories," "Tongoline," "Bromidia," "Campho-Phenique," "Sanmetto," "Pepto-Mangan," and many, many others of similar scientific merit!

THE ADMINISTRATION OF ARSPHENAMIN

Elsewhere in this issue appears a letter from Dr. George W. McCoy, director of the hygienic laboratory of the United States Public Health Service, concerning two special points in the administration of arsphenamin, namely, the dilution and the rapidity of administration. His letter is followed by a circular issued by the Public Health Service to all its officers covering the same general subject. Numerous disagreeable results following the use of the various preparations of arsphenamin have led research workers to make a special study of the cause of these accidents. Such studies have indicated that most of the disagreeable results are not inherent in the preparations themselves, but are produced through faulty steps in the administration of the remedies. The suggestions made in the circular of the Public Health Service, if followed by physicians, will aid in preventing repetition of disagreeable after effects.

V. 191

MENINGOCOCCUS INFECTION

In view of the experience of army physicians in finding many cases of infection with the meningococcus without any evidence of meningitis, Major Herrick, chief of the medical service at the base hospital, Camp Jackson, has urged the abandonment of the term epidemic cerebrospinal meningitis.[1] This suggestion is not an entirely new one; but the considerations on which it is based have apparently not gained sufficient prominence hitherto to emphasize the extrameningeal rôle of the meningococcus through the use of a suitable designation for the general sepsis which this micro-organism may initiate. Practitioners should realize more widely what the unusual clinical facilities of the army base hospitals have emphasized, namely, that a definite meningococcus septicemia not infrequently occurs in which the primary invasion is in the blood stream. Herrick insists that the cerebrospinal distribution of the disease is by no means specific, since other micro-organisms, such as tubercle bacilli and the *Spirocheta pallida* have the same localization. Furthermore, there may be a meningococcic sepsis with involvement of the joints, the pericardium or other structures; hence the designation of cerebrospinal should not be stressed to the exclusion of other symptoms. There is something more than a mere verbal quibble involved in directing attention to the existence of meningococcic sepsis without meningitis. This emphasis, says Herrick, is imperative, because on it is based that modified therapy which, in proper hands, has mitigated the severity of the disease and greatly reduced the mortality—the intravenous serum treatment.

AMPUTATIONS AS WAR DISABILITIES

In the popular mind amputations of the limbs are inevitably conspicuous features of the casualties of warfare. The thought of a battle-scarred veteran of the Civil War commonly brings to mind an armless or legless victim of the damage done by shot and shell. It will come somewhat as a surprise, therefore, to those not conversant with the precise nature of the disabilities of the recent European campaigns to learn how unexpectedly small is the total of those whose wounds and iujuries have necessitated amputation. The War Risk Insurance Bureau has issued the statement that approximately 4,000 men of the American Expeditionary Forces have lost arms or legs, and that about 125 have been blinded. There are several reasons which may account for this unanticipated small incidence of amputations among the many thousands of disabled members of the fighting forces of the United States. By the time we entered the war the hospitals had begun to move nearer to the front where the casualties occur. Consequently the injured received treatment far more promptly than in the earlier years when many hours or even days sometimes intervened before adequate surgical care could be given to the wounds. Delay inevitably means increased liability to infection and permanent damage of the affected tissues; whereas the more prompt surgical intervention of the last year of the war has ofttimes permitted the salvation of a wounded member. Furthermore, the methods of wound treatment have progressed to a higher degree of efficiency, which has brought about a corresponding sparing of life and limb. In the treatise of military surgery published by Hans von Gerssdorff at Strasburg in 1517 under the title "Feldbuch der Wundartzney" he states that he had personally performed "nearly two hundred amputations." According to Buck[1] this great increase in the frequency of performing the operation is clearly to be attributed to the increased use of the new agent—gunpowder—in warfare. *Tempora mutantur!*

1. Herrick, W. W.: Extrameningeal Meningococcus Infections, Arch. Int. Med. **23**: 409 (April) 1919.

1. Buck, A. H.: The Growth of Medicine from the Earliest Times to about 1800, New Haven, Conn., Yale University Press, 1917, p. 462.

Medical Mobilization and the War

Personnel of the Medical Department

For the week ending May 2, there were 18,113 officers in the Medical Corps, a decrease of 454 from the previous week. The Medical Reserve Corps contained 1,799 officers. The total number of medical officers discharged since the beginning of the war is 15,552.

HONORABLE DISCHARGES, MEDICAL CORPS, U. S. ARMY

NOTE.—In the following list, L signifies lieutenant; C., captain; M., major; L. C., lieutenant-colonel; Col., colonel.

ALABAMA

Birmingham—Lull, C., Jr. (M.)
Grand Bay—Dodson, R. B. (C.)
Montgomery—Haigler, J. R. (C.)
Selma—Maas, M. A. (M.)
Vernon—Bos, T. T. (L.)

ARKANSAS

Beebe—Abington, W. H. (M.)
Hope—Kolb, A. C. (L.)
Little Rock—Hickman, S. B. (C.)

CALIFORNIA

Fresno—Martin, W. P. (L.)
Los Altos—Rice, P. (C.)
Los Angeles—Breen, W. V. (M.)
Copeland, I. C. (C.)
Crum, R. L. (L.)
Tweedie, A. M. (M.)
Wilson, C. (L.)
Merced—Zirker, D. W. (C.)
Oakland—Adams, L. P. (C.)
Pasadena—Forbes, H. J. (L.)
Hoit, H. A. (C.)
San Bernardino — Owen, G. R. (M.)
San Diego—Burger, T. O. (C.)
San Francisco — Kinslow, F. A. (L.)
Muller, V. A. (L.)
Pauson, C. A. (M.)
Williams, R. B. (M.)
San Jose—Walter, C. H. (C.)
San Leandro—Wills, C. A. (M.)
Scotia—Cottrell, F. L. (C.)
Stockton—Hammond, R. R. (C.)

COLORADO

Denver—Roehrig, K. F. (L.)
Grand Valley—Miller, F. H. (L.)
Sopris—Gill, A. E. (L.)

CONNECTICUT

Greenwich—Greenway, J. C. (M.)
Hartford—Reardon, W. F. (L.)
Lyme—Devitt, E. K. (L.)
New Haven—Conte, H. A. (L.)
Sound Beach—Austin, A. E. (C.)
Waterbury — Johnson, A. A. J. (L.)

DISTRICT OF COLUMBIA

Washington—Dunlop, J. (M.)
Martin, U. G. B. (C.)
Saffold, G. S. (C.)

FLORIDA

Arcadia—Bevis, H. P. (C.)
Jacksonville—Boyd, J. E. (L. C.)

GEORGIA

Atlanta—Browne, A. D. (L.)
Bunce, A. H. (C.)
Crenshaw, H. (C.)
Matheson, D. N. (L.)
Pentecost, M. P. (M.)
Strickler, C. W. (L. C.)
College Park—Henley, J. T. (L.)
La Grange—Morgan, D. E. (C.)
Meigs—Summerlin, J. L. (L.)
Poulan—Sumner, G. S. (L.)
Sandersville — Rawlings, F. B. (L.)

IDAHO

Caldwell—Cole, F. M. (C.)
Salmon—Hanmer, C. F. (L.)
Twin Falls—Weaver, C. D. (L.)

ILLINOIS

Alton—Day, W. A. (L.)
Barry—Kuntz, W. W. (L.)
Casey—Foster, O. C. (C.)
Chicago—Bernhardt, H. B. (C.)
Bona, J. J. (L.)
Braham, J. A. (L.)
Brawley, F. E. (C.)
Buhling, W. H. (C.)
Eisendrath, D. N. (C.)
Halperin, G. (L.)
Lagorio, F. A. (L.)
Landau, G. M. (L.)
Larkin, C. J. (C.)
Lower, F. S. (M.)
Lyons, P. D. (L.)
McIntyre, G. (C.)
Meyer, J. (L.)
Miller, E. M. (C.)
Slobe, F. W. (L.)
Whitley, W. R. (L.)
Fiatt—Taylor, A. B. (L.)
La Grange—Danielson, W. A. (L.)
Loami—Whisler, S. F. (L.)
McLeansboro—Hall, E. S. (L.)
Rockford—Keith, D. M. (C.)
Steelville — Wiebusch, A. C. C. (L.)
Vandalia—Greer, M. (C.)
Wheaton—Connor, A. B. (C.)

INDIANA

Anderson—Collins, A. W. (M.)
Carlos—Martin, C. E. (C.)
Clinton—Warman, A. P. (C.)
Danville—Ader, J. (L.)
Evansville—Folsom, E. M. (L.)
Fort Wayne — Duemling, H. A. (C.)
Huntertown—Erwin, H. G. (C.)

Indianapolis — MacDonald, J. A. (C.)
Reprass, R. E. (C.)
Indian Springs—Pahmeier, J. W. (C.)
Jeffersonville—Elrod, S. B. (C.)
Logansport—Stanton, J. J. (C.)
Tell City—Williams, F. N. (L.)
Terre Haute — Alexander, O. O. (M.)
Gekler, W. A. (L.)
Warsaw—Reynolds, N. L. (L.)
Young America—Lybrook, D. E. (L.)

IOWA

Clarinda—Sellards, J. W. (L.)
Des Moines—Hoover, A. R. (M.)
Harris—Cady, C. C. (C.)
Ute—Nease, L. S. (L.)
Webster City—McCauliff, G. T. (C.)

KANSAS

Ashland—Burket, I. R. (L.)
Jamestown — McGaughey, H. D. (C.)
Marion—Matlock, C. W. (L.)
National Soldiers' Home—Barker, A. A. (C.)
Pittsburg—Henderson, R. C. (C.)
Valley Falls—Marks, J. M. (L.)

KENTUCKY

Covington—Kiely, C. E. (L.)
Edmonton—Bushong, P. W. (C.)
Lexington—Coleman, R. M. (C.)
Louisville—Hinkle, F. W. (C.)
Morehead—Blair, F. K. (L.)
Williamsburg—Moss, C. A. (L.)

LOUISIANA

Kenner—Kopfler, J. S. (C.)
New Orleans—Burdeshaw, H. B. (L.)
Dicks, J. F. (C.)
Gladden, A. H., Jr. (C.)
Norwood—Mengis, C. L. (M.)

MAINE

Bath—Morin, H. F. (C.)
Biddeford—Kendall, C. F. (M.)
Dexter—Murphy, J. H. (L.)

MARYLAND

Baltimore—Brown, G. B., Jr. (L.)
Cobb, S. (L.)
Jackson, W. J. (L.)
Frederick—Conley, C. H. (M.)

MASSACHUSETTS

Boston—Amiral, H. H. (C.)
Butler, C. S. (M.)
Colby, F. H. (L.)
Davis, L. (L. C.)
Dowling, J. J. (L. C.)
Fraser, A. M. (C.)
Fraser, S. (M.)
Goldthwait, J. E. (C.)
Graves, B. A. (C.)
Leland, G. A., Jr. (C.)
Marlow, S. B. (C.)
Marvin, F. W. (L.)
Putnam, J. J., Jr. (L.)
Schirmer, J. W. (M.)
Wood, W. F. (L.)
Brookline—Adams, Z. B. (M.)
Ohler, W. R. (M.)
Holyoke—Beaupre, D. I. (C.)
Lowell—Lambert, J. H. (C.)
Malden—Hunt, W. E. (C.)
Milton—Lane, W. A. (M.)
Natick—Burns, J. E. (C.)
Newton—Reid, W. D. (C.)
Quincy—Reardon, D. B. (M.)
Springfield—Claffy, J. M. (L.)
Dalton, G. F. (C.)
Whitman—Kinsley, W. G. (C.)

MICHIGAN

Bay City—Goodwin, E. (C.)
Blanchard—Dawson, R. E. (C.)
Bridgman—Littlejohn, D. (M.)
Detroit—Hutchings, W. H. (L. C.)
Lambert, R. H. (L.)
Sumner, B. R. (C.)
Young, G. R. (L.)
Marquette—Main, R. C. (C.)
Owosso—Haviland, J. J. (M.)
Swartz Creek—Clark, A. B. (L.)

MINNESOTA

Fairmont—Lowe, R. C. (L.)
Faribault—Hanson, A. M. (L.)
International Falls—Monahan, R. H. (C.)
Minneapolis—Corbett, J. F. (M.)
Rochester—Hennessey, R. A. (L.)
Sauk Centre — Moynihan, A. F. (C.)
Slayton—Williams, L. A. (C.)
St. Paul—Sohlberg, O. I. (C.)
White, J. S. (L. C.)

MISSISSIPPI

Meridian—Cooper, I. W., Jr. (M.)
Money—Brandon, J. W., Jr. (C.)
Summit—Allen, K. (C.)
Water Valley—Westmoreland, J. D. (C.)

MISSOURI

Kansas City—Byler, W. F. (L.)
Morris, C. L. (L.)
Odessa—Moennighoff, F. J. (C.)
St. Louis—Hoxsey, T. T. (L.)
Lyman, H. W. (C.)
Post, L. T. (M.)
Versailles—Lutman, H. N. (C.)

MONTANA

Chester—Pastene, A. A. (L.)

NEBRASKA

Craig—Westervelt, A. E. (M.)
Lewellen—Hooper, C. L. (M.)
Lincoln—Woodward, J. M. (C.)
Omaha—Dishong, G. W. (C.)
Molseed, C. S. (C.)
Peru—Jack, W. D. (C.)
Weeping Water—Reed, F. P. (C.)

NEVADA

Winnemucca—Swezy, C. E. (M.)

NEW HAMPSHIRE

Berlin—Hatch, H. S. (L.)
Dover—Bennett, R. J. (L.)
Manchester—Dunbar, C. E. (C.)

NEW JERSEY

Bernardsville—Ross, J. G. (L.)
Bordentown—Brown, D. P. (L.)
Hackensack—MacDonald, H. G. (M.)
Jersey City—Jaffin, A. E. (L.)
Newark—Harden, A. S. (C.)
Kraker, D. A. (L. C.)
New Brunswick—Schureman, J. P. (L.)
Newton—Carber, F. H. (L.)
Orange—Riggins, E. N. (C.)
Plainfield—Currie, N. W. (L.)
Ridgewood—Vroom, W. L. (L. C.)
South Orange—Dane, J. M. (L.)
Trenton—Lavine, B. D. (L.)

NEW MEXICO

Mills—Moon, O. B. (L.)

NEW YORK

Albany—Lanahan, J. A. (C.)
Binghamton—O'Neil, D. C. (C.)
Brooklyn—O'Connell, W. J. (L.)
Schaefer, E. L. (L.)
Spence, T. B. (M.)
Taylor, J. M. (M.)
Turley, H. L. (L.)
Ward, R. G. (C.)
Buffalo—Goldsborough, F. C. (C.)
May, H. F. (C.)
Castile—Foster, H. E. (C.)
Clifton Springs—Weeden, W. L. (L.)
Frewsburg—McCulla, F. J. (L.)
Great Neck—Byrne, D. C. (M.)
Lockport—Walder, F. A. (L.)
New York—Ackerman, H. (L.)
Altman, E. (M.)
Auer, C. (L.)
Barnert, C. (C.)
Bjerring, C. L. (M.)
Buckley, R. E. (C.)
Coryell, C. C. (C.)
Darrach, W. (Col.)
Dearborn, F. M. (L. C.)
Fisher, H. (L.)
Freund, H. H. (C.)
King, J. J. (C.)
Leonard, V. N. (C.)
Miller, J. A. (C.)
O'Dwyer, J. J. (C.)
Richards, J. D. (C.)
Skeel, H. R. (C.)
Taylor, F. (C.)
Uhr, J. S. (L.)
Vejvoda, C. (L.)
Portville—Hackett, G. C. (L.)
Rochester—Amsler, E. S. (L.)
Schuylersville—Gow, E. C. (C.)
Syracuse—Fisher, S. R. (C.)
Wynkoop, E. J. (C.)

NORTH CAROLINA

Asheville—Cocke, E. R. (C.)
Pritchard, A. T. (M.)
Council—Holmes, A. B. (L.)
Henderson—Crews, N. H. (L.)
Kannapolis—Watts, R. E. (C.)
Troy—Armstrong, C. W. (C.)

NORTH DAKOTA

Glenburn—Knudson, K. O. (L.)
Grand Forks—Anderson, W. S. (L.)

OHIO

Akron—Skeels, E. T. (L.)
Townsend, C. E. (C.)
Bellaire—Wright, F. S. (C.)
Bucyrus—Caton, R. J. (C.)
Cambridge—Wells, H. L. (L.)
Cincinnati—Bentley, J. M. (M.)
Dunton, A. H. (C.)
Feid, L., Jr. (C.)
Geringer, A. C. (C.)
Koch, A. E. (L.)
Lehman, B. F. (C.)
Tucker, D. A., Jr. (L.)
Whitacre, M. (C.)
Cleveland—Budd, H. A. (L.)
Columbus—Lehner, C. S. (C.)
Lutz, F. A. (C.)
Seeds, A. H. (C.)
Van Dyke, F. S. (L.)
Welch, J. O. (L.)
Copley—Long, P. B. (C.)
Dayton—Rounds, F. C. (C.)
Delaware—Miller, F. V. (L. C.)
Elida—Miller, G. E. (C.)
Forest—Gibson, H. E. (L.)
Guysville — McLaughlin, P. R. (M.)
Kenmore—Alspach, E. Z. (L.)
Lancaster—Bone, P. S. (L.)
Hamilton, C. H. (C.)
Lima—Longsworth, M. J. (C.)
Wagner, M. A. (C.)
Marietta—Hills, A. W., Jr. (L.)
New Paris—Harris, C. H. (C.)
Norwalk—Gill, R. C. (M.)
Sardinia—Chaney, H. M. (M.)
Sherittes—Stewart, F. R. (C.)
South Charleston—Nehls, E. C. (L.)
Tedrow—Evers, W. P. V. (L.)
Toledo—Ford, D. W. (M.)
Youngstown—Cliffe, E. W. (M.)

OKLAHOMA

Drumright—Karasek, M. (C.)
Gracemont—Wheeler, J. W. (L.)

OREGON

Pendleton—Best, J. A. (C.)
Portland—Birney, V. C. (C.)
Hart, F. C. (L.)
Roberg, D. N. (C.)
Salem—Byrd, R. D. (C.)
Scio—Hobson, E. H. (L.)

PENNSYLVANIA

Ashland—Hoffman, J. L. (L.)
Clearfield—Wilson, W. O. (C.)
Erie—Barrett, M. C. (L.)
Johnstown—Mather, H. R. (L.)
McKees Rock — Hawkins, J. C. (C.)
Philadelphia — Bransfield, J. W. (L.)
Gallagher, J. P. (M.)
Gobs, H. W. (L. C.)
Johnson, W. N. (L.)
Leopold, S. S. (C.)
Norris, P. (M.)
Piper, E. B. (M.)
Sifre, R. J. (L.)
Small, W. B. (C.)
Strecker, E. A. (M.)
Walsh, J. P. (C.)
Pittsburgh—Anderson, R. L. (L.)
Cunningham, G. S. (C.)
Holtz, W. M. (C.)
Mackrell, J. C. (C.)
Mechling, C. C. (C.)
Pearce, S. B. (L.)
Reed, J. M. (C.)
Wickerham, E. P. (L.)
Wholey, C. C. (C.)
Punxsutawney—North, C. O. (C.)
Sayre—Kuhlman, H. S. (L.)
Schellburg—Brant, M. V. (C.)
Scranton—Corser, J. B. (L. C.)
Robison, J. I. (M.)
Steelton—Gallagher, J. L. (C.)
Towanda—Dye, A. D. (L.)
Tunkhannock—Taylor, J. G. (C.)
Tylersburg—Hess, J. M. (L.)
Washington—Lewis, O. G. (C.)
Wilkes-Barre—Phillips, C. H. (C.)
Reichard, S. W. (M.)

RHODE ISLAND

Pawtucket—Chatigny, J. V. (L.)
Providence—Lenzner, S. G. (C.)

SOUTH CAROLINA

Wiggins—Ackerman, R. V. (C.)

SOUTH DAKOTA

Abderdeen—Clark, W. E. (C.)
Terry—Hodges, V. R. (L.)

TENNESSEE

Chattanooga—Brooks, L. P. (L.)
Gallatin—Rucker, J. N. (L.)
Knoxville—Crawford, D. W. (C.)
Memphis—Brewer, W. A. (C.)
Ligon, J. G. (L.)
Nashville—Walker, H. H. (C.)
Paris—McSwain, J. H. (C.)

TEXAS

Alvin—Winn, F. R. (M.)
Cleburne—Puncke, A. E. (L.)
Dunn—Morrow, W. H. (C.)
El Paso—Lloyd, W. H. (C.)
Rheinheimer, E. W. (L.)
Stark, H. H. (C.)
Fredericksburg—Townsend, E. R. (L.)
Galveston—Fay, S. S. (L.)
Hico—Durham, C. E. (C.)
Mercury—Locker, S. B. (L.)
Port Arthur—Bussey, N. A. (L.)
San Antonio—Walsh, F. C. (C.)
Tell—Fox, G. C. (L.)
Temple—Jenkings, J. G. (C.)
Westhoff—Boothe, S. P. (C.)

UTAH

Salt Lake City—Lynch, H. (C.)
Peterson, F. L. (C.)

VIRGINIA

Clinch—Osborne, A. N. (L.)
Norfolk—Strickland, J. A. (L.)
Williams, S. D. (L.)
Petersburg—Johnson, D. B. (L.)
Richmond—Turman, J. W. (L.)

WASHINGTON

Auburn—Lacey, M. J. (L.)
Elma—Jones, C. W. (C.)
Mount Vernon—Roach, L. S. (L.)
Seattle—Booth, J. R. (C.)
Ostrom, H. C. (M.)
Rogers, S. (L.)
Spokane—Hanson, R. (L.)
Hopkins, S. B. (C.)
Sumner—Mitchell, W. B. (L.)
Tacoma—Pascoe, C. S. (L.)
Tenasket—Clough, H. B. (C.)
Touchet—Rose, J. W. (L.)

WEST VIRGINIA

Huntington—Van Pelt, J. F. (C.)
Martinsburg—Cowie, C. S. (C.)

WISCONSIN

Alma Center—Griswold, C. M. (L.)
Hartford—Hoffman, J. G. (L.)
Lancaster—Godfrey, R. C. (L.)
Milwaukee—Brook, J. J. (C.)
Wheeler—Dreyer, R. A. (L.)

WYOMING

Kemmerer—McDill, W. F. (C.)

MEDICAL OFFICERS, U. S. NAVY, RELIEVED FROM ACTIVE DUTY

CALIFORNIA

Campbell—Merrill, W. I.

DISTRICT OF COLUMBIA

Washington—Richardson, J. A.
Spencer, J. B.

FLORIDA

Pensacola—Allen, F. M.

ILLINOIS

Chicago—Urie, J. F.

INDIANA

Indianapolis—Rosier, M.

MARYLAND

Owings Mills—Steele, J. M.

MASSACHUSETTS

Boston—Miniter, F. G.
Brockton—Sullivan, A. J.
Chelsea—Padan, C. D.
Coleraine—Mather, J. A.

MICHIGAN

Detroit—Vokes, M. D.

MISSOURI

St. Louis—Bothman, L.

NEW JERSEY

Jersey City—Sirken, C.
Trenton—Collins, H. J.

NEW MEXICO

Albuquerque—Swayne, S. A.

NEW YORK

Brooklyn—Pabst, C. F.
New York—Bisch, L. E.
Crawford, S. E.
Kleinschmidt, H. E.
Serota, H. M.
Turtz, C. A.

OHIO

Cincinnati—Ratliff, T. A.

PENNSYLVANIA

Philadelphia—Becker, J. B.
Miller, M. B.
Thudium, W. J.

VIRGINIA

Covington—File, N. W.
Martinsville—Dudley, G. B., Jr.
Richmond—Buckingham, E. W., Jr.

WASHINGTON

Bremerton—Jones, W. W.

ORDERS TO OFFICERS OF THE MEDICAL CORPS, U. S. ARMY

Alabama

To Army Medical School, from Camp Dix, Lieut. S. B. GAILLARD, Perdue Hill.

To Camp Custer, Mich., camp hospital, from Camp Dix, Capt. R. D. BROWN, Mobile.

To Fort McPherson, Ga., from Charleston, Capt. W. W. BURNS, Selma.

To Westville, N. J., from Charleston, Capt. B. F. ADAMS, Fulton.

To Williamsbridge, N. J., from Long Beach, Lieut. G. LOTTERHOS, Birmingham.

Arkansas

To Camp Pike, Ark., base hospital, from Camp Dix, Major M. D. OGDEN, Little Rock.

California

To Alcatraz Island, Calif., from Camp Sherman, Capt. W. P. MILLIKEN, Oakland.

To Camp Kearney, Calif., from Camp Dix, Major H. G. MARX-MILLER, Los Angeles.

To Denver, Colo., from Fort D. A. Russell, Major K. B. TURNER, Los Angeles.

To Fort Des Moines, Iowa, from Camp Dix, Capt. A. L. FISHER, San Francisco.

To Spartanburg, S. C., from Fort Oglethorpe, Lieut. A. O. HOLMES, Redlands.

To St. Louis, Mo., from Fort Winfield Scott, Lieut. D. P. McCORD.

To Walter Reed General Hospital, D. C., from West Baden, Major C. E. PHILLIPS, Los Angeles.

Canal Zone

To report to the commanding general, Canal Zone, from Panama Canal, Major H. HANSON, Ancon.

Colorado

To Camp Upton, L. I., N. Y., from Walter Reed General Hospital, Lieut. W. D. FLEMING, Denver.

Florida

To Fort Riley, from Camp Grant, Capt. O. W. KING, Sanford.

Georgia

To Otisville, N. Y., from Camp Dix, Capt. R. E. McCLURE, Alto.

To Walter Reed General Hospital, D. C., from Fort McPherson, Major W. E. HALL.

The following order has been revoked: *To Fort Oglethorpe* for instruction, Lieut. J. O. BALDWIN, Fort Gaines.

Illinois

To Camp Dix, N. J., from Camp Custer, Capt. E. H. PARRY, Galesburg. Base hospital, from Camp Gordon, Capt. G. FITZ-PATRICK, Chicago; from Newport News, Capt. G. O. De MOSS, Cropsey.

To Camp Dodge, Iowa, base hospital, from Camp Custer, Lieut. A. W. CHRISTENSON, Rockford.

To Camp Grant, Ill., from Camp Custer, Capt. H. P. BAGLEY, Chicago.

To Columbus Barracks, Ohio, to examine the command for cardiovascular diseases, from Fort Sam Houston, Lieut. F. M. SMITH, Chicago.

To Detroit, Mich., from Camp Dix, Lieut. H. J. DWYER, Chicago.

To Fairfield, Ohio, Wilbur Wright Field, from Hot Springs, Capt. S. W. WILLIAMS, Eldorado.

To Fort Riley, from Camp Grant, Capt. K. M. MANOUGIAN, Kankakee; from Camp Lee, Lieut. H. E. RANDOLPH, East Moline.

To Fort Sheridan, Ill., from Camp Dix, Capt. N. C. MORROW, Chicago; Lieuts. F. W. FIEDLER, Batchtown; T. A. CARTER, I. H. CUTLER, A. S. SANDLER, Chicago; from Camp Grant, Lieut. W. E. GATEWOOD, Jr., Chicago; from Charleston, Lieuts. P. A. STEELE, A. VANDERKLOOT, Chicago.

To Fox Hills, N. Y., from Washington, D. C., Lieut. J. STEVENSON, Chicago.

To Otisville, N. Y., from Camp Dix, Capt. R. H. HENDERSON, Chicago.

To report to the commanding general, Philippine Department, from Fort Riley, Capt. B. I. WYATT, Chicago.

Indiana

To Chicago, Ill., from West Baden, Capt. C. R. STRICKLAND, Indianapolis.

To Denver, Colo., from Camp Dix, Lieut. R. W. REID, Union City.

To Fort Riley, from Camp Shelby, Capt. H. M. SHULTZ, Logansport.

To Fort Sam Houston, Texas, base hospital, from Fort Oglethorpe, Capt. H. B. SHACKLETT, New Albany.

To Fox Hills, N. Y., from Camp Dix, Major R. A. VIOSINET, Union City.

To Hoboken, N. J., from Camp Dix, Capt. M. A. FARLOW, Milroy.

The following order has been revoked: *To Fort Des Moines, Iowa,* from Camp Dix, Lieut.-Col. H. O. BRUGGEMAN, Fort Wayne.

Iowa

To Camp Dodge, Iowa, base hospital, from Fort Douglas, Capt. I. E. NERVIG, Sioux City.

To Fort Benjamin Harrison, from Camp Sherman, Capt. E. L. HAWKINS, Council Bluffs.

To Fort Des Moines, Iowa, from Camp Dix, Lieut. G. V. CAUGHLAN, Pacific Junction.

To Walter Reed General Hospital, D. C., from Hoboken, Capt. H. R. CONN, Cedar Rapids.

Kansas

To Fort D. A. Russell, Wyo., from Newport News, Capt. T. L. JONES, Fulton.

The following order has been revoked: *To Pittsburgh, Pa.,* from Jefferson Barracks, Lieut. A. B. OECHALE, Stockton.

Kentucky

To Camp Meade, Md., from Camp Dix, Major C. W. McCLANAHAN, Maysville.

To Camp Pike, Ark., base hospital, from Washington, Major B. F. ZIMMERMAN, Louisville.

To Fort McHenry, Md., from Camp Dix, Capt. G. P. GRIGSBY, Louisville.

To Walter Reed General Hospital, D. C., from Camp Dix, Lieut. K. D. WINTER, Louisville.

Louisiana

To Fox Hills, N. Y., from Colonia, Major K. W. NEY, New Orleans.

To Walter Reed General Hospital, D. C., from Camp Shelby, Lieut. V. W. MAXWELL, Ferriday.

Maryland

To Camp Dix, N. J., base hospital, from Boston, Lieut. E. H. HEDRICK, Baltimore.

To Fort McHenry, Md., from Charleston, Capt. J. H. TRABAND, Jr., Baltimore.

To Fort Mott, N. J., from Curtis Bay, Md., Capt. H. A. NAYLOR, Pikesville.

To Fort Riley, from Camp Shelby, Major H. R. CARTER, Jr., Baltimore.

To Hoboken, N. J., from Camp Dix, Capt. M. H. TODD, Galloways.

The following order has been revoked: *To St. Louis, Mo.,* from Camp Dix, Capt. W. H. SMITH, Jr., Hagerstown.

Massachusetts

To Boston, Mass., from Camp Lee, Capt. A. A. FENTON, Norwood; from Newport News, Lieut. L. STRAHLMANN, Boston.

To Camp Custer, Mich., from Camp Devens, Col. J. H. ALLEN. As orthopedic surgeon, from Fort Slocum, Lieut. M. A. GILBERT, Chelsea.

To Camp Gordon, Ga., base hospital, from Camp Dix, Capt. R. B. OBER, Springfield.

To Fort McHenry, Md., from Camp Meade, Lieut. W. H. BLANCHETTE, Fall River.

To New Haven, Conn., from Saybrook, Conn., Capt. A. P. PERRY, Boston.

Michigan

To Camp Custer, Mich., from Camp Jackson, Majors A. E. HARRIS, Detroit; A. J. WARREN, Mount Clemens; G. P. SACKRIDER, Owosso; Capts. W. HAUGHEY, Battle Creek; G. P. RAYNALE, Birmingham; R. A. SHANKWILER, G. VAN RHE, Detroit; R. U. ADAMS, W. E. COLLINS, Kalamazoo; Lieuts. I. G. DOWNER, A. McARTHUR, Detroit.

To Detroit, Mich., from Camp Dix, Capt. J. T. HODGEN, Grand Rapids.

To Fox Hills, N. Y., from Charleston, Lieut. W. R. MANLOVE, Jr., Grand Rapids.

To Mineola, N. Y., Hazelhurst Field, from Wichita Falls, Lieut. J. L. DESROSIERS, Detroit.

To Washington, D. C., from Camp Custer, Lieut.-Col. S. S. CREIGHTON.

Minnesota

To Fort Riley, from Camp Grant, Capt. E. L. HALL, Russell; Lieut. J. R. WOOD, Hallock.

To Fort Snelling, Minn., from Fort Bliss, Lieut. H. E. CANFIELD, Willmar.

To Spartanburg, S. C., from Fort McPherson, Capt. L. G. NEAL, Ponemah.

To Walter Reed General Hospital, D. C., from Carlisle, Lieut. B. A. BAIRD, Rochester.

To Wichita Falls, Texas, Call Field, from Taliaferro Field, Lieut. T. F. McCORMICK, Minneapolis.

The following order has been revoked: *To Fort Oglethorpe* for instruction, Lieut. H. G. BLANCHARD, Waseca.

Missouri

To Camp Sherman, Ohio, base hospital, from Fort McPherson, Capt. W. E. MEANWELL, Columbia.

To Fort McPherson, Ga., from Fort Riley, Major L. T. PIM, St. Louis.

To Fort Riley, from Camp Lee, Lieut. E. BAKER, St. Louis.

The following orders have been revoked: *To Camp Abraham Eustis, Va.,* camp hospital, from Pig Point, Lieut. E. V. KRING, St. Louis. *To Camp Zachary Taylor, Ky.,* from Jefferson Barracks, Lieut. J. L. HUTTON, St. Louis.

Nebraska

To Fort Riley, as orthopedic surgeon, from Fort Des Moines, Lieut. C. W. WAY, Wahoo.

To Fox Hills, N. Y., from Williamsbridge, Major A. C. STOKES, Omaha.

New Hampshire

To Camp Devens, Mass., base hospital, from Walter Reed General Hospital, Lieut. J. C. LAWLOR, Dover.

New Jersey

To Camp Dodge, Iowa, from Hoboken, Lieut.-Col. C. E. McBRAYER.

To Chicago, Ill., as department surgeon, from Camp Dix, Col. W. B. BANISTER.

To Colonia, N. J., from Camp Dix, Major Z. L. GRIESEMER, Roselle; from Camp Dodge, Lieut. J. S. MARK, Chrome.

To Columbus Barracks, Ohio, from Hoboken, Lieut.-Col. C. C. DEMMER.

To Walter Reed General Hospital, D. C., from Camp Dix, Major H. C. MOORE.

To Washington, D. C., Surgeon-General's Office, from Camp Dix, Col. E. E. PERSONS; Major J. B. EDWARDS, Leonia.

New York

To Camp Dix, N. J., base hospital, from Pittsburgh, Capt. J. J. SINNOTT, Mount Vernon.
To Camp Jackson, S. C., base hospital, from West Baden, Lieut. L. SASOVER, New York.
To Camp Upton, N. Y., as tuberculosis examiner, from Spartanburg, Capt. J. C. DEVRIES, Brooklyn.
To Carlisle, Pa., from West Baden, Lieut. H. BLAUVELT, Brooklyn.
To Colonia, N. J., from Walter Reed General Hospital, Major E. HANSON, New York.
To Detroit, Mich., from Camp Custer, Capt. J. J. CORBETT, Syracuse.
To Fort Benjamin Harrison, from Walter Reed General Hospital, Lieut. J. HARKAVY, New York.
To Fort Hamilton, N. Y., from Fort Slocum, Capt. J. C. E. DAUNAIS, Cohoes.
To Fort McHenry, Md., from Camp Dix, Lieut.-Col. J. W. JAMESON, Major W. W. WEEKS, New York; from Detroit, Lieut. C. W. DEMONG, Syracuse.
To Fort Riley, from Camp Lee, Lieut. J. F. LEWIS, New York.
To Fox Hills, N. Y., from Camp Dix, Major C. W. HOYT, Rochester; Capt. R. P. HUYCK, Herkimer; Lieut. W. G. H. POTT, New York; from Charleston, Capt. E. C. FOSTER, Penn Yan; from Hoboken, Major A. C. MARTIN, Rockville Center; from Oteen, N. C., Lieut. B. C. BULLEN, New York; from Walter Reed General Hospital, Capt. B. H. CAPLES, New York.
To Hoboken, N. J., from Charleston, Capt. A. W. BRENNAN, Syracuse.
To Metuchen, N. J., from Schenectady, Capt. G. W. WILLCOX, Hamilton.
To Oteen, N. C., from Camp Lee, Major W. C. McKNIGHT, New York.
To report to the commanding general, Northeastern Department, from Long Beach, Lieut. B. R. BASS, Brooklyn.
To Walter Reed General Hospital, D. C., from Camp Upton, Lieut. M. M. NEMSER, New York; from Long Beach, Major E. B. NEFF.
To Washington, D. C., Surgeon-General's Office, from Camp Dix, Lieut.-Col. W. B. REID, Rome.

The following orders have been revoked: *To Camp Sherman, Ohio, to examine the command* for cardiovascular diseases, from Jefferson Barracks, Lieut. C. SHOOKHOFF, Brooklyn. *To Fox Hills, N. Y.*, from Camp Dix, Lieut. W. E. CARROLL, New York.

North Carolina

To Biltmore, N. C., from Camp Dix, Lieut.-Col. W. L. DUNN, Asheville.
To Camp Grant, Ill., base hospital, from Camp Dix, Capt. L. F. MAGRUDER, Albemarle.
To Fort Riley, from Camp Lee, Lieut. R. T. UHLS, Franklinton.

Ohio

To Camp Devens, Mass., base hospital, from Walter Reed General Hospital, Lieut. W. H. MILLER, Columbus.
To Camp Dodge, Iowa, from Camp Dix, Major A. H. DUNN, Chillicothe.
To Carlisle, Pa., from Charleston, Lieut. R. G. GROSSMAN, Cleveland.
To Fort McHenry, Md., from Camp Dix, Capt. E. R. TWACHTMAN, Cincinnati.
To Walter Reed General Hospital, D. C., from Camp Dix, Major E. J. McCORMICK, Toledo; Lieut. W. E. DWYER, Cleveland; from Camp Jackson, Capt. R. F. DRURY, Akron.

The following orders have been revoked: *To Fort Oglethorpe* for instruction, Capt. M. H. CARMEDY, Painesville. *To Philippine Department*, from Camp A. A. Humphreys, Capt. H. S. HAYES, Whitehouse.

Oklahoma

To Camp Zachary Taylor, Ky., base hospital, from Camp Dix, Capt. C. E. NORTHCUTT, Lexington.
To Fort D. A. Russell, Wyo., from Fort Benjamin Harrison, Capt. G. H. WETZEL, Sapulpa.
To report to the commanding general, Western Department, from San Francisco, Lieut. C. P. MURPHY, Redrock.
To Westville, N. J., from Camp Jackson, Capt. B. F. ADAMS, Fulton.

Oregon

The following orders have been revoked: *To Fort Leavenworth, Kan.*, from Camp Lewis, Lieut. D. R. ROSS, Salem. *To San Francisco, Calif.*, from Camp Lewis, Capt F. J. ZIEGLER, Portland.

Pennsylvania

To Boston, Mass., from Camp Dix, Major W. BATES, Philadelphia.
To Camp Abraham Eustis, Va., camp hospital, from Washington, Capt. W. S. STEWART, McDonald.
To Camp Gordon, Ga., base hospital, from Spartanburg, Lieut.-Col. J. H. STEARNS, Delaware Water Gap.
To Camp Meade, Md., from Camp Dix, Major W. E. RAKEN, Philadelphia; from Camp Shelby, Major T. W. PENROSE, Philadelphia.
To Columbus Barracks, Ohio, from Camp Zachary Taylor, Capt. H. D. JORDAN, Allentown.
To Eastview, N. Y., from San Francisco, Capt. R. J. HENDERSON, Bowmansville.
To Fort McHenry, Md., from Camp Dix, Capts. I. M. BOYKIM, N. R. GOLDSMITH, S. R. SKILLERN, Jr., Philadelphia.
To Fort Riley, from Camp A. A. Humphreys, Major A. E. DAVIS, Scranton.
To Fox Hills, N. Y., from Hoboken, Capt. R. C. FAGLEY, Kulpmont.
To Pittsburgh, Pa., from West Baden, Lieut. D. T. DITCHBURN, Arnot.
To Walter Reed General Hospital, D. C., from Camp Dix, Capt. W. W. PROPST, Philadelphia; Lieut. W. H. MACKAY, Harrisburg.
To Washington, D. C., and on completion *to Roland Park*, from Eastview, Capt. R. R. DECKER, Orbisonia. Surgeon-General's Office, from Camp Dix, Lieut.-Col. E. L. ELIASON, Major F. C. KNOWLES, Lieut. M. W. BLAIR, Philadelphia.

South Carolina

To Biltmore, N. C., from Camp Sevier, Lieut. W. E. MILLS, Sumter.
To Camp Jackson, S. C., base hospital, from Camp Dix, Major E. C. MAJOR, Latta.
To Carlisle, Pa., from Camp Dix, Capt. J. A. DILLARD, Columbia.
To Fort Riley, from Camp Travis, Lieut. J. L. BLAIR, Sharon.

South Dakota

To report to the commanding general, Western Department, from San Francisco, Major A. M. GIFFIN, Rapid City.

Tennessee

To Camp Zachary Taylor, Ky., base hospital, from Charleston, Major J. L. MORGAN, Memphis.
To Fort McPherson, Ga., from Charleston, Capt. A. H. MEYER, Memphis.

Texas

To Walter Reed General Hospital, D. C., from Camp Travis, Major A. L. VAN METER.

Vermont

To Boston, Mass., from Camp Dix, Lieut. J. D. THOMAS, Pownal.

Virginia

To Washington, D. C., Surgeon-General's Office, from Roland Park, Major N. ARDAN, Bristol.

Washington

To Camp Jessup, Ga., from Charleston, Major F. J. CULLEN, Nanavine.
To Fort D. A. Russell, Wyo., from Camp Lewis, Lieut. H. J. HARDS, Tacoma.
To San Francisco, Calif., Letterman General Hospital, from Camp Dix, Capt. J. M. HENDERSON, Seattle.

West Virginia

To Washington, D. C., Surgeon-General's Office, from Fort Adams, Major L. C. COVINGTON, Charleston.

Wisconsin

To Erie Proving Grounds, Ohio, from Camp Custer, Lieut. E. A. LINGER, Oconto.
To Fort Riley, from Camp Grant, Lieut. H. A. VINCENT, Beloit.

ORDERS TO OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE

Asst. Surg.-Gen. C. C. PIERCE, proceed to New York for conference relative to venereal control work and training for nurses.

Surg. E. K. SPRAGUE, relieved at Portland, Maine, and venereal disease control work in Boston. Proceed to marine hospital and assume charge of the Service.

Surg. H. S. MATHEWSON, relieved at Boston, Mass., proceed to the marine hospital at Vineyard Haven, Mass., and assume charge.

Surg. L. D. FRICKS, relieved at Louisville, Ky., assume charge of field investigations of malaria. Headquarters transferred from New Orleans, La., to Memphis, Tenn.

Surg. W. C. BILLINGS, relieved at San Francisco, Calif, proceed to Alexandria, La., and assume charge of the Public Health Service Hospital.

Surg. W. A. KORN, proceed to Fort Stanton, N. Mex., and assume charge of the station.

Surg. L. P. H. BAHRENBURG, proceed to Dawson Springs, Ky., for inspection of location for hospital and sanatorium.

Surg. F. H. McKEON, relieved at Fort Stanton, N. Mex., proceed to Charleston, S. C., and assume charge of the quarantine station.

Surg. A. C. SEELY (Reserve), proceed to various points in the States of Oregon, Washington and Idaho to attend meetings of various district and county medical societies.

Passed Asst. Surg. LAWRENCE KOLB, relieved at Ellis Island, N. Y., proceed to Waukesha, Wis., and assume charge of the Public Health Service Hospital.

Passed Asst. Surg. R. A. KEARNY, proceed to New York, to investigate the needs of the Hudson Street Hospital when taken over by the Public Health Service.

Passed Asst. Surg. C. L. WILLIAMS, proceed to New Orleans on special temporary duty.

Passed Asst. Surg. J. H. SMITH, proceed to Washington, D. C., for conference relative to venereal disease control work in New Jersey.

Passed Asst. Surg. W. L. TREADWAY, relieved from duty in school hygiene. Report to the Chief Medical Advisor, Bureau of War Risk Insurance for duty.

Passed Asst. Surg. C. V. AKIN, represent the Service at the Seventh Annual Convention of the Southeastern Sanitary Association at Rome, Ga., on May 12 and 13, 1919.

Passed Asst. Surg. C. H. WARING, relieved at Newport News, Va., proceed to Washington, D. C., for conference.

Asst. Surg. M. F. HARALSON, proceed to Newport News and Portsmouth, Va., to inspect extracantonment zone work at those places.

Asst. Surg. J. W. MOUNTAIN, detailed as member of Coast Guard retiring board to meet at Portland, Maine, April 29, 1919.

Acting Asst. Surg. R. H. MAYHEW, proceed to Greenville, S. C., for duty in the Public Health Service Hospital.

Assoc. San. Engr. H. H. WAGENHALS, proceed to Brunswick, Ga., for investigation of drainage in connection with malaria conditions.

Asst. San Engr. ARCHIE GORMAN, proceed to Texarkana, Ark., to investigate malaria control along railroads.

Asst. San. Engr. A. J. WILLISON, proceed to Memphis, Tenn., for conference regarding antimalaria measures.

Scientific Asst. H. S. HUTTON, proceed to Perryville, Md., for duty at the Public Health Service Hospital.

Scientific Asst. HAVARD D MOYER, proceed to the marine hospital, Baltimore, Md., for inspection of X-ray laboratory and equipment.

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Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ALABAMA

New State Officers.—The Medical Association of the State of Alabama at its annual meeting, April 17, elected the following officers: president, Dr. James S. McLester, Birmingham; vice presidents, Drs. Henry S. Ward, Birmingham, and Walter S. Britt, Eufaula; secretary, Dr. Henry G. Perry, Montgomery (reelected), and treasurer, Dr. Jacob U. Ray, Woodstock. Features of the session were the unfurling of a service flag containing 600 stars, and a memorial service in honor of those physicians of the state who gave their lives in the service of their country.

DISTRICT OF COLUMBIA

Undue Prevalence of Smallpox.—Health authorities, as well as the populace, are disturbed by the unusual amount of smallpox in Washington during the past few months. Quite recently the situation was made more acute by the discovery of some twenty cases among the pupils of St. Ann's Academy, a private school in the southeastern portion of the city. This circumstance raises the question of the efficacy of the existing vaccination law which makes vaccination a necessary condition for admission to the public schools but does not apply to private schools. The health officer is, of course, authorized to compel vaccination wherever necessary in the presence of a smallpox epidemic, but that officer has announced his intention of seeking an extension of the vaccination law as it affects schoolchildren so that the private schools shall be brought within its scope.

The Medical Society Smoker.—The Medical Society of the District of Columbia held a "Get-Together Smoker" at the Wardman Park Hotel, April 30. The president of the society, Dr. William Gerry Morgan, presided over the assemblage of some 175 members and guests. Dr. John B. Deaver of Philadelphia addressed the gathering, the subject of the scientific portion of his address being "The Importance of the Early Recognition of Diseases of the Biliary Passages." He concluded his address by emphasizing the importance of a strong and representative medical organization at the national capital, particularly having in view the world position Washington is destined to hold; and he urged on the members the duty of supporting the movement for the erection of a permanent home for the society. Drs. E. Y. Davidson, William P. Carr, J. B. Nichols, A. Frances Foye and William Gerry Morgan made short addresses on various phases of the building project, and Dr. Thomas Charles Martin concluded the program with one of his inimitable prose poems, the title of which might be rendered "Cows' Tails and Their Relation to Science and Art." Songs appropriate to the occasion were composed by Dr. John Foote and sung by the assembly.

Sanitary Control of the Milk Supply.—The health officer of the District, being clothed with authority to enforce the various provisions of pure food laws, is responsible for the maintenance of safe and desirable standards of purity and food value in the milk supply of Washington. Inasmuch as practically all the milk that is vended here is produced in the states of Maryland and Virginia, the producers are amenable only to the laws of those states and the requirements of the District of Columbia laws are made applicable by a system of licensing producers disposing of milk through Washington distributors. Licenses are granted on the basis of acceptable farm conditions, good health of the herd, and suitability of the milk based on the findings as to bacterial count and butter fat content. But once licensed, revocation or suspension of the license can be secured by the health officer only by prosecution in court, sustained by necessary laboratory evidence. Meanwhile the poor or dangerous milk may be freely distributed to the unsuspecting public. Because of the numerous instances in which inferior milk has recently been found in the local market, the health officer will make renewed efforts to secure legislation authorizing him to confiscate any milk which is found to be dangerous to the public health. Many aspects of the milk producing industry illustrate the close relation between public hygiene, the economics of husbandry, and the economics of eleemyosynary and similar public institutions. Thus a nearby milk producer, who for a number of years supplied the Walter Reed General Hospital with milk on the basis of an annual contract, has retired from the dairying business and sold off his entire herd, because the commandant of the Walter Reed Hospital has adopted the plan of buying milk on the basis of monthly contracts. No doubt there may be good reasons for this action of the hospital authorities, and the plight of the dairyman in this instance is obvious, but it is highly unfortunate that the local milk supply should lose one of its large tributaries and at the same time should be called on to sustain the milk requirements of such a large institution from the remaining resources.

IDAHO

Personal.—Dr. Tracy R. Mason was reelected mayor of Kellogg, April 22.

Tuberculosis Hospital Commission.—The governor of Idaho has appointed a tuberculosis commission to erect two tuberculosis hospitals in the state and to supervise the work preliminary thereto. The members of the commission are Dr. Floyd G. Wendle, Sand Point; Mr. F. A. Davis, Moscow; Norman B. Adkinson, Pocatello, dean of the department of chemistry of the Idaho Chemical Institute, and Mrs. W. A. Athay, Boise. The legislature appropriated $5,000 for the use of this commission and also authorized a levy of one fourth of a mill on all taxable property in 1919, and one eighth of a mill in 1920, which will raise about $185,000 for the construction and operation of the hospitals.

ILLINOIS

Illegal Practitioner Fined.—Evans Tucker, Peoria, was arrested by the Department of Registration and Education of the State of Illinois for practicing medicine without a license and was fined $25 and costs.

Paris Physician in Springfield.—Dr. Paul E. Davy, Paris, a member of the commission for the prevention of tuberculosis in France, who has been spending six months in the United States studying methods of tuberculosis work, spent April 22 and 23 in Springfield as the guest of Dr. George Thomas Palmer.

Personal.—Dr. Frank P. Norbury, Springfield, who has been serving since August, 1918, as acting medical director of the National Committee for Mental Hygiene in New York City, in the absence of Thomas W. Salmon, Col., M. C., U. S. Army, and Frankwood E. Williams, Major, M. C., U. S. Army, has returned home.

State Society Meeting.—The sixty-ninth annual meeting of the Illinois State Medical Society will be held in Peoria, May 20 to 22, under the presidency of Dr. Edward W. Fiegenbaum, Edwardsville. There will be a symposium on influenzal pneumonia which will be introduced by Surg. Wade H. Frost, of the U. S. P. H. S., and the oration on surgery will be given by Dr. Jabez N. Jackson, Kansas City, Mo.

Chicago

Cook County Hospital Examinations.—The results of this competitive examination, just announced, indicate that Rush Medical College secured thirty-six out of forty-five available appointments; Northwestern University Medical College, five; University of Illinois, three, and Chicago College of Medicine and Surgery, one.

Personal.—Dr. John Dill Robertson has been reappointed commissioner of health.——Donald M. Gallie, Capt., M. C., U. S. Army, who has been on duty for a year in the department of facial surgery at Base Hospital No. 11, Nantes, and American Hospital No. 1, Neuilly, France, has returned from overseas.——Dr. Joseph C. Beck, who has been in charge of the Czecho-Slovac Medical Unit at Cognac, France, returned to Chicago, April 25.——French S. Carey and Stanton A. Friedberg, Majors, M. C., U. S. Army, have returned from service with the American Expeditionary Forces in France.

INDIANA

Health Officers to Meet.—The annual meeting of the health officers' school was held under the auspices of the state board of health at the Claypool Hotel, Indianapolis, May 6 and 7.

Society Asks to Change Name.—The Marion County Society for Prevention of Tuberculosis has asked permission in the circuit court to have its name changed to the Marion County Tuberculosis Association.

License Revoked.—An official report states that the license of Dr. George F. Smith, Bicknell, was revoked, Feb. 26, 1919,

by the Indiana State Board of Medical Registration and Examination on the ground of misrepresentation of facts in regard to his high school education at the time he secured his license to practice.

Personal.—Dr. Jacob G. Cox, Kokomo, is reported to be seriously ill in a hospital in Cincinnati.——Dr. Lewis N. Geisinger, Auburn, has been elected vice president of the De Kalb County Health and Anti-Tuberculosis Society.——Dr. George E. Lowe, Indianapolis, was severely bruised, April 16, in a collision between automobiles, in which his car was wrecked.——Dr. George V. Cring, Portland, has been appointed health commissioner of Jay County to fill the unexpired term caused by the resignation of Dr. Grant Chaney.

IOWA

Hospital Item.—The new psychopathic hospital, for which an appropriation of $175,000 was made by the last legislature, will be erected on the new University of Iowa campus, Iowa City, west of the new Children's Hospital.——Dr. Willard T. Graham, superintendent of the Iowa Hospital, Iowa City, has decided that adult cripples entitled to treatment at state expense, under the extension of the Perkins law, may be accommodated at the institution.——Mercy Hospital, Davenport, has had plans completed for a new nurses' home to cost $100,000.

Personal.—Dr. J. Fred Clarke, Lieut.-Col., M. C., U. S. Army, Fairfield, commanding Hospital Unit R, which has been overseas for sixteen months, returned home, April 26.——Dr. Mary K. Heard, Iowa City, has been appointed traveling representative of the Y. W. C. A. for Iowa, Nebraska, Wisconsin and the Dakotas.——Dr. George M. Middleton was reappointed city physician of Davenport, April 15.——Dr. Winfield S. Devine, Marshalltown, who was operated on at Rochester, Minn., April 12, for disease of the kidney, is reported to be improving.——Dr. Frank C. Roberts, Fort Madison, has been reappointed a member of the insane commission of Lee County.——Dr. Oscar A. Dahms has been reelected a member of the board of directors of the public schools of Davenport, and Dr. Karl Vollmer has been reelected president of the board.——After being out only thirty minutes, the jury in the case of Dr. Charles A. Snyder, Dubuque, charged with the murder of Mrs. Florence Gagne of East Dubuque, Ill., by the performance of an illegal operation, found Dr. Snyder not guilty.

LOUISIANA

New Officers.—The fortieth annual convention of the Louisiana State Medical Association was held in Shreveport, April 7 to 10, under the presidency of Dr. Wilkes H. Knolle, New Orleans. Dr. Amedee Granger, New Orleans, was elected president, and Dr. Sidney C. Barrow, Shreveport, secretary-treasurer.

New Orleans Inaugurates a Systematic Hay-Fever Campaign.—Three years ago, through the efforts of the New Orleans section of the American Hay-Fever-Prevention Association, an ordinance was passed by the commission council for the control of hay-fever weeds in that city. Although this was beneficial to some extent, it lacked efficiency, as in many cases, persons preferred the fine to paying a larger cost for cutting the weeds. In order to improve its efficiency, this ordinance was amended last year, authorizing the city to cut the weeds after due notice to the property owner. This method, which was instituted by the American Hay-Fever Prevention Association and which is recommended for other cities, is proving efficient to the public from a sanitary standpoint, as well as from an economical standpoint. It is expected to result in a still lower rate in the number of hay-fever cases in New Orleans.——Announcement was made by the Charity Hospital, New Orleans, April 17, that the hay-fever department would resume its semiweekly clinics on Tuesdays and Thursdays which will be continued until the end of the hay-fever season in November.

MARYLAND

Appointments.—The Baltimore City Health Department has made the following appointments: Dr. Wright S. Sudler, health warden for the twenty-sixth ward; Dr. Leon S. Horka, health warden for the twenty-fifth ward, and Drs. Joseph T. Nelson, Bernard V. Kelly and Jay T. Hennessey, throat inspectors for the health department.

Hospital Offers Clinic.—An offer from the South Baltimore General Hospital to establish a maternity clinic without cost to the city was made to the board of estimates recently and has been accepted. Health Commissioner John D. Blake, Baltimore, was authorized to appoint a physician to take charge of the clinic, which is to be maintained in connection with the Bureau of Child Hygiene and Infant Mortality. The clinic is to be for the women of South Baltimore, including those living in the Brooklyn and Curtis Bay sections.

Personal.—Samuel J. Fort, major, M. C., U. S. Army, Catonsville, one of the fifty-four expert rifle and pistol shots selected to form the instructional personnel of the Small Arms Firing School at Camp Perry, Ohio, and later one of six officers detailed from the school to assist in training the Nineteenth Division at Camp Dodge, Iowa, has been discharged from the Army and is now visiting at Catonsville.——Dr. Charles H. Latimer, Laurel, assistant physician at the Laurel Sanitarium, is accompanying a member of the Swiss legation to his home in Geneva, Switzerland.

To Study Tuberculosis.—The National Association for the Study of Tuberculosis has recently granted $10,000 for an exhaustive scientific study to be made in Baltimore of the underlying causes of tuberculosis, under the direction of a committee consisting of Dr. Henry Barton Jacobs, Baltimore, president of the Maryland Association for the Study and Prevention of Tuberculosis; Dr. Raymond Pearl, professor of biometry and vital statistics in the School of Hygiene and Public Health, Johns Hopkins University, and Dr. William T. Howard, Baltimore, assistant commissioner of health. The grant is intended to defray the expenses of the investigation and study for a year and the start will be made as soon as the necessary force of investigators can be organized. Baltimore city makes an annual appropriation of $30,000 to the health department for its tuberculosis work, and yet little progress has been made toward the reduction of the death rate. This is because the department has been unable to make its investigation as far reaching and as effective as the officials in charge have felt that the situation demanded.

MASSACHUSETTS

Charged with Illegal Practice.—David J. Khoury, Lawrence, is said to have been summoned before the local board of health, April 2, charged with the illegal practice of medicine.

Hospital for Women.—A new women's hospital with accommodation for 150 women and girls is to be established in Boston by the Salvation Army. The institution will be largely given over to maternity work.

Public Health Nursing Subdivision Created.—The Massachusetts State Department of Health announces that a subdivision of public health nursing has been created within the division of hygiene. This will include the health instructor nurses of the division of hygiene. Miss Blanche Wildes, one of the present health instructors, has been appointed chief of this division.

Personal.—Edwin M. Kent, Boston, has been appointed supervisor of mouth hygiene in the division of hygiene of the state department of health. His work will have to do with the preparation of educational material on mouth hygiene and gathering and correlating information regardig dental dispensaries in the state.——Miss Bernice W. Billings, chief of the subdivision of tuberculosis in the division of communicable diseases in the state department of health, has resigned to accept a position as executive secretary of the Oneida County (N. Y.) Tuberculosis Committee.——Dr. George Thomas Tuttle, after forty years' association with the McLean Hospital, Waverly, the greater part of this time as superintendent of the institution, has resigned. He has been elected a member of the board of trustees of the Massachusetts General Hospital.—Harvey Cushing, Lieut.-Col., M. C., U. S. Army, in command of Base Hospital No. 5, reached New York, April 22.——Dr. Harold W. Hersey, Winchester, assistant superintendent of the Massachusetts General Hospital, Boston, has been elected superintendent of the Macon (Ga.) Hospital.——Dr. Lee Sutton has been appointed special pathologist in the Boston City Hospital.

MICHIGAN

Alumni Clinic.—The thirtieth annual clinic of the Alumni Association of Detroit College of Medicine and Surgery will be held in Detroit May 13 to 20.

Medical Officers May Borrow from Society.—It is announced that members of the Wayne County Medical Society who have returned from war service may borrow up to $300 to reestablish themselves in practice. The funds will be loaned on notes bearing interest at 4 per cent.

V. 7 1919

Health Board Act Passed.—An act abolishing the present state board of health and putting in its place an advisory council of health was passed by the senate, April 15, by a vote of 23 to 5. In its final form the bill creates a state health commissioner to be appointed by the governor, and an advisory council of health of five members also to be appointed by the governor.

Personal.—Dr. Arthur J. Carlson, for four years health officer of Escanaba, has resigned.——Dr. Francis Duffield has been appointed president of the board of health of Detroit. ——Dr. Fred N. Bonine has been reelected mayor of Niles. ——Drs. Harry B. Knapp, Battle Creek, and D. M. Morril, Houghton, have become members of the staff of the Copper Range Hospital, Trimountain.

MINNESOTA

Southern Minnesota Medical Meeting.—The midsummer meeting of the Southern Minnesota Medical Association will be held at Rochester, June 30 and July 1.

Resignation Not Accepted.—After an executive session of the state board of health, April 29, it is announced that the board by unanimous vote refused to accept the resignation of Dr. Henry M. Bracken, secretary of the board, which had been demanded by the senate, April 21.

Personal.—Dr. Cora Hulda S. Allen, Heron Lake, has returned after a year in Red Cross service in Paris.——Dr. Milo E. Bushey, Arlington, has been elected secretary of the Sibley County Public Health Association.——Dr. Albert J. Chesley, Minneapolis, who served for six months in France, and then was ordered to duty in Poland, has been appointed head of the public health work with the Polish forces.—— Dr. Frederick Barrett has been elected mayor of Gilbert.—— Dr. John E. Campbell has been appointed city physician of St. Paul.

MONTANA

Personal.—Dr. Clarence J. Munch, Culbertson, has been appointed physician of Sheridan County.——Dr. Herbert H. Judd has been appointed health officer of Bozeman and Gallatin counties.——Dr. Charles E. K. Vidal, Great Falls, has been appointed superintendent of the State Tuberculosis Sanatorium at Galen, succeeding Dr. Alexander D. MacDonald, deceased.

New State Board Officers.—At the annual meeting of the state board of health in Helena, April 7, Dr. Daniel J. Donohue, Butte, was elected president, Dr. Louis H. Fligman, Helena, vice president, and Dr. William F. Cogswell, secretary (reelected). Dr. John J. Sippy, Topeka, state epidemiologist of Kansas for six years, was appointed to a similar position in Montana.

NEW YORK

Reconstruction Committee Favors Health Insurance.—The governor's reconstruction commission has adopted a report favoring compulsory health insurance for industrial workers "as a measure of essential and enforcible health protection." Hearings on the question have been under way for some time and have been attended by leading civic workers and insurance authorities. The investigation is to be continued with a view to preparing a bill that will meet all contingencies.

New York City

Dues of Members in Service Remitted.—The Comitia Minora of the Medical Society of the County of New York has passed resolutions empowering the treasurer to remit the dues of members in service who so request. Such requests must be filled at once so that the books of the society may be brought up to date.

Personal.—Dr. Joseph A. Blake, who had charge of an American Ambulance at Neuilly, and later of a hospital of his own at Ris Orange, France, under the British Red Cross, has returned to this country.——Dr. Elbert M. Somers, Brooklyn, has completed his service with the American Red Cross as hospital superintendent in France.

New Site for Orphan Asylum.—A new site for the Hebrew Orphan Asylum, comprising 103 acres on Two Hundred and Thirty-Third Street in the Bronx, has been purchased for $350,000. It is planned to erect new buildings at a cost of about $1,000,000. The cottage system is favored, with separate buildings for hospital, dispensary and schools.

Association for Study of Exceptional Children.—The National Association for the Study and Education of Exceptional Children held its annual meeting and dinner at the Hotel McAlpin, April 30. Among the speakers were Dr. Frederick J. Farnell of Providence, R. I.; Dr. E. Bosworth McCready, Pittsburgh; Dr. Francis N. Maxfield of Newark, N. J.; Dr. Ira S Wile of New York City, and Health Commissioner Royal S. Copeland

Red Cross to Teach Home Nursing.—The American Red Cross has rented an apartment in a tenement house at 510 West Twenty-Sixth Street where it will teach elementary hygiene and home nursing to tenement dwellers in that locality. If the experiment is successful similar centers will be established in other parts of the city. The enterprise is receiving the cooperation of Health Commissioner Royal S. Copeland and Dr. John Lovejoy Elliott.

OHIO

Honor Senior Physicians.—In honor of the four oldest practitioners of Allen County, a dinner was given at Lima, April 15, by the Allen County Medical Society. The guests of honor were Drs. Jonathan B. Vail and Enos G. Burton, Lima, Newton Sager, Lafayette, and Salathiel A. Hitchcock, Elida.

State Medical Board.—The personnel of the state medical board of Ohio is at present: Dr. Benjamin R. McClellan, Xenia, president; Dr. Charles E. Sawyer, Marion, vice president; Dr. Herbert M. Platter, Columbus, secretary; Dr. Sylvester M. Sherman, Columbus, treasurer, and Drs. John H. J. Upham, Columbus, Lee Humphrey, Malta, Lester E. Siemon, Cleveland, and John K. Scudder, Cincinnati.

Venereal Disease Clinics.—During March nearly 800 persons with venereal diseases were treated in clinics maintained under the supervision of the state department of health, the increase over the figures for February being 250. Clinics were opened in nine cities in March and arrangements have been completed for the immediate establishment in six additional cities. The work of these clinics is being supplemented by educational work and measures for the repressing of vice. Provision is also made for the quarantining of persons whose habits make them a menace to the public health.

Personal.—Dr. William Roehn, who was recently discharged from military service, has been reappointed jail physician at Dayton.——Dr. James B. Hall, Mansfield, suffered a cerebral hemorrhage, April 13, and is reported to be in a critical condition.——Dr. Otto Mueller, Cleveland, was shot through the abdomen, April 15, by a sanitary policeman whose wife had been under Dr. Mueller's care. ——Willard C. Stoner, Lieut.-Col., M. C., U S. Army, Cleveland, commander of Evacuation Hospital No. 3, Treves, Germany, who went overseas with Base Hospital No. 52, in July, 1918, arrived in America, April 4.

Special Course of Instruction for Physicians.—A special course for physicians will be held at the Ohio State Sanatorium, Mount Vernon, from June 24 to June 27. The course has been suggested by Dr. Edward G. Reinert, Columbus, and arranged by Dr. Stephen A. Douglass, Mount Vernon, superintendent of the sanatorium, and includes a course of ten lectures and clinics, including the history of tuberculosis; anatomy and histology of the lungs, physiology of respiration; pathology of pulmonary tuberculosis; modes of infection; theory of child infection; heredity; symptomatology; diagnosis; treatment; differential diagnosis; tuberculosis of children; sociological factors, and prophylaxis. Physicians interested in this course should communicate with Dr. Stephen A. Douglass, superintendent of the Ohio State Tuberculosis Sanatorium, Mount Vernon.

OKLAHOMA

Hospital Standardization.—A meeting has been called at Muskogee for May 21, for the purpose of organizing a state hospital association. One of the prime objects of this organization will be the standardization of hospitals in the state.

Personal.—Dr. John W. Duke, Guthrie, state commissioner of health, has resigned and Dr. Arthur R. Lewis, Ryan, has been appointed his successor.——Dr. Benjamin T. Bitting has been appointed medical superintendent of the State Institution for the Feebleminded, Enid.

Sanatorium Bill Passed.—The last official act of the seventh legislature of Oklahoma was to pass the sanatorium bill which has been fostered by the Oklahoma Tuberculosis Association. The bill provides for two sanatoriums for white persons and one sanatorium for negroes. The appropriation for the former institution is $200,000 and $50,000 for the negro institution, and an additional appropriation of $100,000 was made for maintenance for the coming biennium. The bill

also provides for the creation of a bureau of tuberculosis in the state department of health under a chief who will have a salary of $3,000. Each county is authorized to levy a special tax, not exceeding 1 mill, for a tuberculosis fund, and from this levy a large part of the cost of maintenance of the sanatoriums will be derived. The superintendent of each district sanatorium is authorized to establish tuberculosis dispensaries in his district and to employ at least one public health nurse on his staff.

PENNSYLVANIA

State Will Abandon Quarantine Station.—State quarantine service, for years operated at Marcus Hook, will be discontinued June 1. This announcement was made in Harrisburg by Governor Sproul. The federal government will take over the entire quarantine service, thus saving a double inspection of ships before they reach the port of Philadelphia. This change will save the state at least $50,000 a year.

Personal.—Dr. Jacob W. E. Ellenberger, Wilkinsburg, has been appointed acting medical inspector in place of Dr. Adolph Koenig, Pittsburgh, resigned.——Dr. Cornelius C. Wholey, Pittsburgh, who has been psychiatrist to the United States General Hospital at Roland Park, Md., since December, 1918, has returned home.——Joel T. Boone, M. C., U. S. Navy, Pottsville, has been awarded the Croix de Guerre with palm for bravery under fire at Rheims last October.

Philadelphia

Personal.—Ernest LaPlace, Lieut.-Col., M. C., U. S. Army, who has been in command of the post hospital at Fortress Monroe and of the medical stations and coast defense of Chesapeake Bay, has obtained his discharge and has returned to his home.——William M. Late Coplin, Lieut.-Col., M. C., U. S. Army, was recently discharged from Camp Dix, after ten months' service with the American Expeditionary Forces in France and Germany.——Robert G. LeConte, Lieut.-Col., M. C., U. S. Army, has been made a chevalier of the Legion of Honor. Colonel LeConte was attached for some time to the staff of the Pennsylvania Hospital, but went to France with the Methodist Hospital Unit and was naval consultant for Pershing's forces.

Public Health Day.—Wednesday, April 30, was celebrated as Public Health Day and a program was arranged under the auspices of the Department of Health and Charities, Babies' Welfare Association, College of Physicians, City Club, Board of Public Education, Civic Club, Housing Association, Philadelphia County Medical Association, Children's Playground Association, Pennsylvania Society for the Prevention of Tuberculosis, City Parks Association, and Child Federation. At the morning exercises addresses were delivered at all the high schools on matters dealing with personal hygiene and promotion of public health. A long table luncheon was held at the City Club at 12:30 and Dr. Wilmer Krusen, director of public health and charities, and Dr. John D. McLean, assistant commissioner of health, state of Pennsylvania, were the speakers. In the evening a mass meeting was held in the auditorium of the William Penn High School at which Dr. James M. Anders presided.

Hospital Units Return.—The Jefferson Hospital Unit known as Base Hospital No. 38, and the Pennsylvania Base Hospital, known as No. 20, arrived in New York, April 28. Some officers of both units returned home several weeks before, and some of the nurses are still in France, having been transferred to other hospitals. John B. Carnet, Lieut.-Col., M. C., U. S. Army, commander of Base Hospital No. 20, returned home ten days before. Base Hospital No. 20 had been at Chatel Guyon and during the course of their stay they administered to approximately 1,000 sick and wounded and only fifty deaths were reported. While the Chateau Thierry and Argonne drives were in progress, they were taxed to the limit, as the personnel was decreased in order to provide mobile teams to go to these fronts. Base Hospital No. 38, stationed at Nantes, took care of more than 9,000 patients and had a capacity of treating 1,000 patients daily. When the armistice was signed, ten medical officers, thirty-six nurses and 100 men were caring for 2,400 sick and wounded.

SOUTH CAROLINA

New State Board Members.—The following have been selected as members of the State Board of Medical Examiners: Joseph T. Tayer, Adams Run, first district; Frank M. Lander, Williamston, third district; Baxter M. Haynes, Spartanburg, fourth district; J. R. Hill, fifth district, and Julius H. Taylor, seventh district.

New Officers.—At the seventy-first annual meeting of the South Carolina Medical Association, held April 15 and 16, the following officers were elected: president, Dr. Ebenezer W. Pressly, Clover; vice presidents, Drs. Dudley H. Smith, Florence, Charles A. Mobley, Rock Hill, and Linnaeus C. Shecut, Orangeburg, and secretary-treasurer, Dr. Edgar A. Hines, Seneca (reelected). Greenville was selected as the next place of meeting.

VERMONT

New Laws for Medical Education and Public Health.—The legislature of Vermont has passed the following bills relating to medical education and public health:

No. 166, which provides that the State Board of Medical Registration may, at such time as it deems expedient, require of all applicants for examination to practice medicine and surgery a certificate that they have had a one year's internship in a hospital approved by the board.

No. 167, amending Section 6091 of the general laws relating to the standard of requirement for admission to practice medicine and surgery so as to require two college years of preliminary education for medical students.

No. 168, amending Sections 6093, 6094, and 6095 of the general laws regarding the practice of medicine, surgery, osteopathy, and chiropractic, which provides that "A person who, not being licensed, advertises or holds himself out to the public as described in the following section, or who, not being licensed, practices medicine or surgery, or who practices medicine or surgery under a fictitious or assumed name, or who impersonates another practitioner or signs a certificate of death for the purpose of burial or removal, shall be imprisoned not more than three months or fined not more than two hundred dollars or both." This also defines the practice of medicine.

No. 169 bringing all medical practitioners under the provisions of the section for revoking of licenses for cause.

No. 170 which amends Section 6100 of the general laws relating to the qualifications of the practitioners of osteopathy raises the qualifications for osteopaths from three years of nine months each to four years of nine months each.

No. 172 an act to regulate the practice of chiropractic which provides for the appointment of an examination board of three members who shall be chiropractors. The requirements for licenses shall be satisfactory evidence of a high school education or its equivalent, applicants shall be at least twenty-one years of age, of good moral character and graduates of a reputable school of chiropractic requiring three years' resident studentship, payment of $25 to the treasurer of the board, and the successful passing of the examination in anatomy, physiology, symptomatology, hygiene, chiropractic orthopedy, histology, pathology, neurology and principles of chiropractic and clinical demonstration of vertebral palpation, nerve tracing and adjusting, and such other subjects as the board may prescribe.

No. 175 authorized the State Board of Health to appoint district health officers in place of town health officers and specifies their duties.

No. 176, which provides that the director of state institutions may with the approval of the board of control, designate or construct a ward or hospital at any state institution for the purpose of giving necessary treatment and care to inmates of such institutions, as may be afflicted with tuberculosis, or other contagious or venereal disease. disease.

No. 177, amending Section 6250 of the general laws and provide for the reporting of venereal diseases for the entering of sale of drugs by physicians and for the treatment of venereal diseases, and for the reporting by druggists of the sale of medicine for use in the treatment of venereal disease.

No. 178, amending Section 6252 of the general laws and whereby the state provides for facilities for the free laboratory examination of material from suspected cases of venereal diseases and the furnishing of specific treatment at cost or free to clinic patients.

No. 179, which amends Section 6253 and deals with the confidential nature of the reporting or information leading to reports in connection with persons suffering from venereal diseases, and section 7035, which provides penalty or imprisonment of not less than two years, or fines of not less than $500 in cases of marriage of the person who has been afflicted with venereal disease unless certified to have been cured by a legally qualified practitioner; Section 7036 provides a sentence of imprisonment for not less than two years, or fines of not less than $500 for any person who, while suffering from venereal disease, has sexual intercourse.

No. 180 sets aside a sum of $10,000 from the money annually appropriated to the State Board of Health to be expended for the purpose of rural sanitation in order to take advantage of any appropriation from the Federal Government that may become available by the state.

WASHINGTON

Personal.—Ralph Hendricks, Major, M. C., U. S. Army, has been appointed city health officer of Spokane.——Dr. James E. Crichton has been elected president of the Seattle Anti-Tuberculosis League.——A farewell reception was given to Dr. and Mrs. John B. Anderson, Spokane, by the employees of the city health office and members of the Rivercrest Contagion Hospital, April 18. Dr. Anderson is retiring as city health officer after eight years of service to become state commissioner of health. A gold badge bearing the insignia

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of his new office was presented to Dr. Anderson, Dr. John R. Neely, Spokane, making the presentation speech.——A luncheon was given at Spokane, April 22, in honor of Dr. Herbert E. Wheeler, Spokane, who has just returned after war service abroad.——Dr. Wilbur N. Hunt, Burlington, has succeeded Dr. Francis B. West, Mount Vernon, resigned, as physician of Skagit County.——Dr. Mabel Seagrave, Seattle, has returned after nearly a year of service overseas.——Dr. John W. Mowell, Olympia, chief surgeon of the Industrial Insurance Company, will retire from that office in June to become a member of the new Safety First Commission and will be succeeded as chief surgeon by Dr. Floyd A. Bird, Kelso.——Dr. Thomas D. Tuttle, health officer of Seattle, has been appointed state epidemiologist of Kansas.——Dr. Hiram M. Read has succeeded Dr. John S. McBride as health commissioner of Seattle.——Samuel E. Lambert, Spokane, Lieut.-Col., M. C., U. S. Army, who recently returned from overseas duty with the Spokane Hospital Unit, has been appointed post surgeon at Fort George Wright, Spokane.——Dr. John Reith, College Place, for seven years superintendent of the Walla-Walla Sanatorium, is about to leave for England, en route to Capetown, South Africa, where he will take charge of a hospital.

WEST VIRGINIA

State Association Meeting.—The annual meeting of the West Virginia State Medical Association will be held at Clarksburg, May 20 to 22.

Examination to Be Held.—Dr. Samuel L. Jepson, Charleston, commissioner of the board of health of the state, announces that the next examination of the West Virginia Public Health Council will be held at the Hotel Huntington, Huntington, July 8 to 10.

Personal.—Dr. Carl F. Raver has been appointed epidemiologist of the state board of health of West Virginia.——Dr. Frank H. Ikirt has been appointed jail physician of Wheeling, succeeding Dr. Harry P. Campbell.——Dr. John W. Kidd, Burnsville, who has been seriously ill, is reported to be convalescent.

CANADA

Addresses in Medicine and Obstetrics.—Sir St. Clair Thompson, London, England, is to deliver the address in medicine at the annual meeting of the Ontario Medical Association in Toronto, May 28, taking for his subject: "Shakespeare as an Aid in the Art and Practice of Medicine;" Dr. J. Morris Slemons, professor of obstetrics and gynecology in Yale University, New Haven, Conn., will deliver the address in obstetrics.

Queen's University Receives Endowment.—Queen's University, Kingston, Ontario, reports that an additional endowment of $1,000,000 has been received for the general purposes of the university. The medical faculty will benefit from this fund in proportion to its requirements, and it is proposed that several more full-time professors will be secured and the departments of physiology, bacteriology and public health will be developed. A fund of $200,000 is also available to be expended in the reconstruction of the hospital.

Public Health in Ontario.—Under the Venereal Act it is not being found that gonorrhea and syphilis is such a menace as some would have the people of the province believe. In March there were only ninety-seven cases of syphilis reported for the whole province; 183 of gonorrhea; chancroid, four; in April, 110 cases of syphilis, 139 of gonorrhea and three of chancroid. There were 137 deaths from influenza in April, and 341 from pneumonia. The total deaths from all causes were 2,510. During the month the Ontario Board of Health distributed 21,557,000 units of antitoxin to places where diphtheria existed.

Personal.—Dr. Alexander McPhedran, Toronto, has resigned the professorship of medicine in the University of Toronto medical department, and Dr. Duncan A. L. Graham has been appointed his successor. Recently Sir William Osler invited professors of medicine in the United Kingdom to a dinner in Dr. Graham's honor, at which it was stated that Dr. Graham was the first whole-time professor of medicine appointed in the British empire. The appointment was made possible by the munificence of Sir John Eaton, Toronto. As a result all physicians in the service of the medical department at the university will resign, so that Dr. Graham will have a free hand in selecting his own staff.——Dr. Archibald P. Knight, for twenty-seven years professor of physiology in Queen's University, Kingston, Ontario, will, it is said, shortly tender his resignation, but will retain his position until a successor is appointed.

LATIN AMERICA

National Medical Congress of Colombia.—The *Repertorio* of Bogotá recalls that the Fourth National Medical Congress of Colombia is to convene at Tunja, August 7, of the current year. The registration fee of $5 is to be sent to Dr. J. Del C. Cárdenas, Bogotá, Colombia.

Prohibition in Mexico.—It is reported from Mexico that the National Board of Health, presided over by Dr. J. M. Rodriguez, has prepared and submitted for consideration by the national government a bill which will result in the enforcement of absolute prohibition in Mexico. In the opinion of the board, alcoholism is a national affliction which should be combated by every possible means.

National Medical Congress of Venezuela.—A Venezuela exchange states that the Third Venezuelan Congress of Medicine has been postponed to July 5, 1921, centennial of the date of the battle which decided the independence of Venezuela. The committee of organization announces that the medical geography of the country is the main topic for discussion. This includes the study of malaria, beriberi, yellow fever and the medical flora of the country.

The Amazonas Medical Association.—The foundation of the Sociedade de Medicina e Cirurgia do Amazonas dates from early in 1917. There were about twenty-four charter members, and meetings have been held regularly nearly every month since, at Manaos. The first president was Dr. J. M. Leão. The officers for the current year are Dr. A. A. da Matta, president; Dr. J. M. Leão, vice president; Dr. J. Linhares de Albuquerque and Dr. F. M. Vidal, first and second secretary, and Dr. E. Duarte, treasurer. There are five committees, including the one, with five members which publishes the *Amazonas Medico*, the quarterly issued by the society. All communications for the editors should be sent to Dr. A. A. da Matta, Caixa postal 40 Manaos. It is announced that every published work sent to them will be listed and reviewed.

GENERAL

National Tuberculosis Association Meeting.—The fifteenth annual meeting of the National Tuberculosis Association will be held in Atlantic City, N. J., June 14 to 17, under the presidency of Dr. David R. Lyman, New Haven, Conn. On the first day the chief topic for discussion will be "What Is the Future of the Tuberculosis Movement: Shall it Remain Specialized or Merged with Other Health Agencies." On June 16, there will be symposiums on "What Has More Centralized Control to Offer in Solving the Tuberculosis Problem?" and "The Discharged Tuberculous Soldiers." During the session of the last day, the principal topics for discussion will be "Removal and Relief of Poverty as Factors in the Prevention of Tuberculosis"; "The Schedule of Tuberculosis Work for the Public Health Nurse," and "The Classification and Standardization of Tuberculosis Sanatoriums and Hospitals."

Attempts to Secure a Medical Diploma.—The dean of the University of Minnesota Medical School reports that an individual calling himself William C. Carroll sent in an affidavit issued in Harris County, Texas, stating that a diploma he says he received from the University of Minnesota had been destroyed by fire and asked to have a copy sent to him at 15 Newhall Street, Lynn, Mass. He also claims in another affidavit to have finished a course at the Mayo Clinic in 1915 and in that affidavit refers also to the destruction of his diploma. The report states that the Dr. William C. Carroll, who is the rightful owner of the diploma issued by the University of Minnesota Medical School, is still living in St. Paul. He states that this other "William C. Carroll" is evidently a fraud who is attempting in this manner to secure a diploma. Secretaries of state licensing boards are urged to be on the lookout for this individual.

Bequests and Donations.—The following bequests and donations have recently been announced:

Methodist Hospital, Philadelphia, $25,000 by the will of Henry H. Morrison on the death of two persons who have life interest in the estate.

Peter Bent Brigham Hospital, Boston, $10,000 for the establishment of a free bed, and at the termination of a trust fund created for benefit of Mr. Cochrane's family, the principal of the trust to Harvard College, by the will of Alexander Cochrane, Boston.

Leland Stanford, Jr., University Medical School, San Francisco, a donation of $12,000 for the purchase of one gram of radium to be used in connection with the actinographic department of the Stanford University Hospital, San Francisco, by Mr. and Mrs. William Fitzhugh. The income of this fund is to be used for beds for indigent patients, particularly for those who need roentgen-ray or radium treatment.

Vanderbilt Clinic of the College of Physicians and Surgeons in the City of New York, and Presbyterian Hospital Tuberculosis Clinic, New York City, each $8,500; Loomis (N. Y.) Sanatorium, and Trudeau Sanatorium, Saranac Lake, N. Y., each $3,000; New York Association for Improving the Condition of the Poor and Home Hospital, New York City, each $2,500; Stony Wold Sanatorium, Lake Kushaqua, N. Y., $2,000; Hospital and Home of Rest for Consumptives, Inwood, N. Y., $1,000, and Henry Street Settlement for Tuberculosis Nursing, $500. Donations were by the trustees of the East River Homes Foundation, New York City.

Ophthalmic Examinations.—The American Board for Ophthalmic Examinations will conduct its fifth examination at the Wills Eye Hospital, Philadelphia., June 6 and 7. The board is composed of representatives of the American Ophthalmological Society, the Section on Ophthalmology of the American Medical Association, and the Academy of Ophthalmology and Oto-Laryngology. For a certificate of this board, the examination in ophthalmology consists of case records, written examinations, and clinical laboratory and oral examinations, or so much thereof as may be judged necessary. Candidates in ophthalmology are required to submit twenty-five complete case records of which not more than ten should be descriptive of operations. These records should be of cases of ocular diseases and defects of varied character, including errors of refraction or muscle balance; external ocular diseases or diseases of the uveal tract or retina, or of the optic nerve, or glaucoma. The reports should show especially the reasons for the diagnosis, and for the operative treatment and the technic of operations in operative cases. The written examination will test the candidate's knowledge of the underlying principles of the science of ophthalmology, including anatomy, embryology, physiology, physiologic optics, pathology, relations of the eye to the other organs and diseases of the body. The oral examination will include: the external examination of the eye; ophthalmoscopy (candidates are requested to bring their own ophthalmoscopes); measurements of errors of refraction; testing of the ocular movements and fields of vision; relations of ocular conditions to diseases of other parts of the body and their treatment, and laboratory examination in histology, pathology and bacteriology of the eye. Further information may be had on request from the Secretary, Dr. William H. Wilder, 122 South Michigan Avenue, Chicago.

FOREIGN

Tuberculosis Course in Spain.—On the initiative of Dr. Verdes Montenegro, steps are being taken to establish a course in tuberculosis in the medical school of the University of Madrid.

Honorary Medical Degree Given Red Cross Director.—The University of Liege, Belgium, April 28, conferred the honorary degree of Doctor of Medicine on G. Johan Van Schott, Jr., Washington, D. C., American Red Cross commissioner for Belgium, in recognition of his services in Belgian hospitals during the war.

Tuberculosis in Austrian Prisons.—Speaking before the Massachusetts Anti-Tuberculosis League in Boston, April 23, Seymour H. Stone, secretary of the Boston Tuberculosis Association, and who has been in charge of Red Cross work in the Province of Genoa, Italy, declared that between 40,000 and 60,000 soldiers have contracted tuberculosis in Austrian prisons.

Tragic Death of Doederlein.—According to a cable dispatch, Prof. Albert Doederlein was among the hostages said to have been shot in Munich during recent political disturbances. Doederlein has been professor of obstetrics and gynecology at the University of Tübingen since 1897. Before that he served for a time at the University of Groningen in Holland. He has written much on puerperal fever and on various gynecologic surgical subjects. He had not quite reached his sixtieth year.

Navy Aids Red Cross Work.—Six submarine chasers have been placed at the disposal of the American Red Cross by the Navy for the transfer of personnel and supplies to the various islands in the Grecian Archipelago where the work of the Red Cross has been begun and is rapidly increasing. ——King Alexander of Greece, April 9, received Lieut.-Col. W. Anderson, member of the American Red Cross Commission to the Balkans, and his staff, and Lieut.-Col. Edward Capps, director of the American Red Cross in Greece, and expressed his appreciation of the work done by the American Red Cross in Macedonia, and of the efforts of the physicians and nurses in checking the ravaging of typhus in Macedonia and the islands of the Grecian Archipelago.

MEXICO LETTER

MEXICO CITY, April 29, 1919.

A Pasteur Institute at Managua

Having the desire of establishing a Pasteur Institute, the government of Nicaragua has asked the Mexican government to send, at the expense of the former, a person to establish it. In compliance with this request, the Mexican authorities have intrusted Dr. G. Leal with this duty, and he will depart shortly with the necessary personnel and equipment. As a courtesy to a sister republic, the Mexican government will bear the expenses connected with the trip.

Intellectual Interrelations

Mention has been made at different times in these letters from Mexico of the more or less serious plans to establish an exchange of professors and students between Mexico and the United States, and I have expressed regrets that nothing concrete came out of such plans. It seems that something definite, however, will at last be accomplished in this direction, for the University of Washington has submitted plans for a proposed exchange with the University of Mexico. This will begin by sending a Mexican professor to Seattle to begin his course Jan. 2, 1920, and end it September 30, devoting the other three months to giving conferences on Mexican civilization, history, and customs in the states of Washington, Montana, Idaho and Oregon. This professor should, of course, know English, and would be accompanied by as many students of both sexes as might be determined by the University authorities of Mexico. The American professor would arrive at Mexico before February 7, when his course would begin, ending in October, and he would devote the rest of the year in visiting the universities of the states of Puebla, Jalisco, and Michoacán, in which he will give conferences in Spanish on American subjects. The expenses of this exchange of professors would be borne by the respective universities.

Commission for the Study of Typhus

In accordance with the resolutions adopted by the Congress on Typhus Fever, held last January, there has just been organized in this city a central commission for the study of typhus fever. The commission will have for its object to initiate, direct and advance the investigations made in this country on typhus (tabardillo), and it is preparing a general program for both clinical and experimental work which, it is believed, will result in yielding at an early date satisfactory information on the cause and treatment of typhus fever, and of the preventive measures which should be enforced against this disease. The commission has requested the assistance of the public health and political authorities, the medical profession, scientific associations, and the people in general, since the work is of general interest. The chairman of the commission is Dr. D. José Terrés, and the secretary Dr. D. Alfonso Pruneda, whose address is : 1/a. del Alamo, no. 14.

International Congresses

The Congreso de Americanistas, which was going to meet in Rio de Janeiro next June, has been postponed until the year 1920.

Antialcoholic Campaign

There has just been founded a league called "Asociación Anti-alcohólica Nacional," having for its object a campaign against alcoholism. The league will oppose the transfer of American distilleries to Mexico. They say that in the border towns the traffic in spirituous liquors is on the increase, since those who cannot get them in Texas have only to cross the border to supply themselves in Mexican territory.

Personal

Dr. R. Raygadas will soon leave for the city of Berne to represent the Mexican Red Cross at the International meeting which will be held there after peace is signed.

Dr. G. Gómez has been elected president of the Mexican House of Representatives.

Dr. R. Cepeda, president of the Board of Aldermen, has asked to be relieved of his place, because of his being a senator. He probably will be succeeded in his aldermanic position by another physician, Dr. L. Coyula.

Dr. M. Aveleyra and Dr. A. B. Vasconcelos have obtained permission from the university authorities to give extra courses (cátedras libres) in the School of Medicine on medical pathology.

LONDON LETTER

LONDON, April 7, 1919.

Chemistry in the National Service

At the annual meeting of the Chemical Society, the president, Sir W. J. Pope, delivered an address which showed how British science in the end outclassed the long and careful preparations of the Germans. He remarked that the efficiency of the British gas protection, which called for the exhibition of so much scientific skill both in research and in manufacture, was an illustration of the paramount importance of science which appealed to the general public; but it was only a small branch of the enormous chemical problem which presented itself to the nation nearly five years ago and which led to the formation of the department of explosives supplies. As the magnitude of the struggle became gradually obvious, it was realized that the whole of the resources of the empire would have to be utilized. A census of all available chemical products had to be taken, and schemes for their exploitation laid down; all materials had to be apportioned with the knowledge that whatever was used for the manufacture of one particular war product left a corresponding shortage of that particular raw material in connection with the manufacture of some other and perhaps equally essential product. The necessity for utilizing all the chemical resources of the country led to the attempt to extract the last possible fraction of efficiency in each component process, and the huge production—at the time of the armistice the country was making about 100,000 tons yearly of nitric acid and sulphur trioxid, 60,000 tons of trinitrotoluene and 35,000 tons of cordite—made it profitable to carry out a vast amount of careful scientific investigation of details of manufacture.

An instructive example of the results of the struggle for economy was found in the rivalry which arose between picric acid and ammonium nitrate as high explosives. The former cost about $925 a ton to make, the latter about $250, and trinitrotoluene about $500. A mixture of trinitrotoluene and ammonium nitrate, known as amatol, which was introduced early by the research department at Woolwich, was less costly to manufacture, apart from other advantages. The growing appreciation of its merits led to discontinuance of the manufacture of picric acid in this country last summer, to its adoption in place of picric acid as the American standard high explosive, to the approaching elimination of picric acid from the Italian military program, and to replacement of picric acid by amatol in the French service. Our production of the chemical materials needed for a great European war, though negligibly small in 1914, gradually attained satisfactory dimensions. The great chemical factories of Central Europe could divert their production at very short notice. Why, then, were the Allied nations given time to develop their war production of explosives and noxious materials from nothing? When in July, 1917, the Germans first began to use the so-called mustard gas, British chemists were amazed to find, from examination of the product, that it was being manufactured by a technically cumbrous process that gave a yield of, perhaps, 40 to 60 per cent. of the theoretical. By the end of January, 1918, we had worked out a process which yielded in the laboratory from 98 to 99 per cent. of the theoretical. This was communicated to our allies, who at the time of the armistice had an available daily production of mustard gas equal to the monthly production of the Central nations. German chemical service was, therefore, inefficient and the scientific chemists under its control were incompetent. But while other instances could be given to show that Germany was badly served by her scientific men during the war, it would be difficult to overrate the skill and perseverance exhibited by the German chemical manufacturers. The view that this country is superior to Germany in the possession of creative scientific power had always been maintained in modern times by students of philosophy and history, and was amply demonstrated during the last four years. While we overcame our handicap by a continuous flow of novel scientific devices of military value, our enemies passed through the war with little more in the shape of novel effects than those laboriously elaborated during the preceding years of peace.

"Colonies" in the Treatment of the Tuberculous

A memorandum on the share of "Colonies" (institutions for training and for employment) in the treatment of the tuberculous, prepared by Dr. J. E. Chapman, medical inspector of the local government board, has been issued. In a prefatory note, Sir Arthur Newsholme, late medical officer of the board, says that the memorandum indicates possible lines of development, and points out that for control over tuberculosis to be satisfactory it must extend beyond sanatoriums and colonies and include satisfactory housing. It is uneconomical to neglect the home life of consumptives on whose previous medical treatment large sums have been spent, either as regards bedroom accommodation or the nutrition of the patient or his family. No scheme for the control of tuberculosis can be regarded as satisfactory which does not embrace the whole life of the consumptive patient.

Dr. Chapman states in his memorandum that colony treatment is the natural development of measures taken in sanatoriums to secure for selected patients more permanently beneficial results than can be obtained by sanatorium treatment alone. The work provided in the earlier colonies was usually agricultural, but few of the patients continuing in their occupations after discharge from the colony. More recently colonies have been established in which patients are employed and trained in occupations which, although prima facie not so suitable as agriculture, can be followed under reasonably good conditions, and are likely to be adopted by the patients as a means of earning their livelihood.

The first point to decide is whether or not a patient can return to his old occupation. If this is consistent with his health and offers an adequate wage, the idea of a new occupation should not be entertained. The occupation selected should give an almost assured outlook for continuous employment with adequate wages and under reasonably good working conditions. Although better results may be anticipated for colony treatment than is practicable under present conditions of sanatorium treatment, there remains considerable risk of the breakdown of the patient on his return to ordinary life. To minimize this risk the services of care committees should be available to assist patients after discharge from the colony. It is important also that ex-patients should be housed under conditions which will enable them to maintain health. It is suggested that about 5 per cent. of the new houses to be built under impending housing schemes should have a separate bedroom for the patient, in which free perflation of air is secured. The extension of colony treatment to certain classes of patients in which the disease is unlikely to become arrested is worthy of consideration. The colony might be used with advantage as a half-way house between the sanatorium and ordinary life for patients whose health has been greatly improved by sanatorium treatment, but who will probably relapse very quickly if the transition to full work is abrupt. Provision might also usefully be made at colonies situated near a town for the part-time employment of irrecoverable patients whose working capacity is temporarily or permanently impaired. The provision of suitable part-time work adapted to their capacity and of suitable housing would enable the patients and their families to derive the maximum benefit from such financial assistance as is available. This further development of colonies would not only benefit the patients, but would also form an important measure for diminishing the spread of infection.

PARIS LETTER

PARIS, April 10, 1919.

Treatment of War Injuries of the Spinal Cord

At a recent meeting of the Société de chirurgie de Paris, Dr. Tuffier read a communication on this subject from Dr. R. Dumas. Dumas is of the opinion that wounds of the spinal cord should be subjected to the same treatment as all other war wounds, that is to say, by excision, removal of fragments of bone, repair of nerve lesions—when that is possible—and closure of the wound. Tuffier, however, does not believe that such treatment should be the rule, because in a large number of cases when the patient is in shock his life would be endangered by operation, whereas after ten or twelve days the operation is no more serious than with any ordinary war wound. Dumas' statistics confirm this statement: In thirteen cases in which operation was done between the first and the fifth day after the injury occurred, death resulted in five; while only three fatalities occurred in twelve cases in which operation was done some time during the first two months after the wound was inflicted. None of the patients who were operated on early received any special benefit therefrom, nor was there any return of motion or any improvement in sphincter function, and only three showed evidence of slight regression of anesthesia and corresponding return of sensation. Nor did those patients who were operated on late show any evidence of improvement. Nothing, in short, seems to justify the opinion

that wounds of the spinal cord should be treated like other war wounds, and early intervention does not seem to be called for. An exception should be made, however, in those cases which present incomplete lesions or compression of the cord by a projectile or a bone fragment, as shown clearly in the roentgenogram. In these cases marked improvement may be obtained by immediate operation, but it must be borne in mind that removing the cause does not necessarily suppress the effect. Even after removing the intramedullary projectile or the bone fragment, or after relieving compression caused by a displaced vertebra, functional disturbances may persist, sometimes indefinitely. Everything depends on how much pathologic change has taken place in the cord. However, it is certain that in all cases in which incomplete division or compression of the cord is suspected, intervention, after the shock symptoms have disappeared, is indicated.

The Smallpox Vaccination Service During the War

Dr. A. Fasquelles, director of the Service antivariolique de l'Armée, recently read a report at the Académie de médecine on the work done by his department and the results that had been obtained during the war. This Centre vaccinogène de l'Armée was organized by the Service de Santé militaire, and it succeeded in ministering to the needs of the various armies, the navy and the colonies in the tropics. The average of positive revaccinations exceeded 50 per cent. During the war of 1870-1871 more than 120,000 French soldiers were infected with smallpox, and more than 25,000 died; during the recent war only twelve cases occurred in the metropolitan French army, with only one death. This is the first time that a war has not been accompanied by a smallpox epidemic.

Progress of French Medicine

In response to a request made by the medical department of the U. S. Army, biweekly medical meetings are to be held in the Grand Amphithéâtre of the Paris medical faculty for the purpose of discussing contributions made to medicine by French investigators. At the first two meetings Professor Richet will describe the work of Descartes, Lavoisier, Bichat, Claude Bernard and Pasteur.

French Urologic Society

The Société française d'urologie has been formed in Paris. Its membership will consist of active and honorary members. Professor Guyon is honorary president and Dr. Legueu, professor of diseases of the genito-urinary system on the Paris medical faculty, is president.

To Increase the Birth Rate

M. Simonet submitted a report to the senate on the proposition advanced by him to increase the donations to be made to public and private enterprises engaged more particularly in raising the birth rate and promoting infant welfare.

Association of the War Blinded

The war blinded have formed an association to provide means for putting to the best use the activities of which they are still capable and for mutual aid and moral and material welfare. Plans will be studied to establish funds for mutual aid, to cooperate in the purchase of raw materials, arrange for cooperative work and salesrooms, in short, to provide for every possible means and measures which will make the life of the blind easier.

Closing the Spanish Hospital

The Spanish hospital has recently been closed with suitable ceremonies. This hospital was established for the French wounded at the instance of King Alphonso; the maintenance and management were in charge of the Spanish colony. M. de Quinonès de Leon, the Spanish ambassador, presided. The grand cross of the Mérite militaire was awarded to Dr. de Sard, the physician in chief of the hospital, and other crosses of the same order were given to all those who had volunteered their services to realize this important war work.

Antialcohol Conference

At the suggestion of the English and American representatives of the antialcohol movement, the Ligue nationale contre l'alcoolisme has summoned a Conférence internationale des hygiénistes of all countries of the world, both allied and neutral. This conference holds its sessions in the headquarters of the Ligue, April 3 to 5, 1919. The following propositions will be discussed: (1) List of antialcohol desiderata to be submitted to the Peace conference in conformity with Article 19 of the constitution of the League of Nations; (2) special measures taken against alcohol during the war; (3) the new aspect to be given, after peace is declared, to the organization of the international defense against alcohol; (4) measures to be taken to develop further the scientific and statistic researches already in progress, notably those under way at the Bureau international de Lausanne.

Fraternizing of American and French Students

The Association générale des étudiants de l'Université de Paris recently tendered a reception to the American students returning from the front. M. André Tardieu, general commissioner of affaires de guerre franco-américaines, presided and was assisted by M. Lucien Poincaré, rector of the University of Paris, the deans of the faculties and numerous professors and Colonel Exton, in charge of the American student soldiers. M. Tardieu in the course of impromptu remarks dwelt on the community of ideals which had brought about the Franco-American alliance, and voiced his approval of the students' plea—that their comrades be permitted to return to their studies as soon as possible. He promised to use his influence with parliament and the government to bring this about.

Scientific Institute Established at Saigon

M. Albert Sarraut, governor-general of Indo-China, recently announced the establishment of a scientific institute at Saigon, to study the development and utilization of the products of the soil and of the water of Indo-China. An inventory will be made of the natural resources of Indo-China, and the institute will aim to exploit them properly by means of laboratory studies, experimental research and scientific explorations.

Removal of Certain Food Control Measures

M. V. Boret, minister of agriculture and food commissioner, has removed certain restrictions on foods, such as the restriction on the manufacture and sale of fresh pastry, the use of bread flours for making biscuits and pastry; the manufacture and sale of desiccated, sterilized or condensed milk, of butter, cheese and other milk products; the manufacture and sale of confectionery, especially of chocolate confections and milk chocolate, likewise the restriction on the use of eggs and butter for making crackers (biscuiterie) and pastry.

Personal

Dr. Albert Calmette, former director of the Institut Pasteur at Lille, now subdirector of the Institut Pasteur at Paris, was recently elected an active member of the section on public hygiene and legal medicine of the Académie de médecine.

Marriages

C. Harold Heffron, Lieut., M. C., U. S. Army, Metamora, Ohio, on duty at Fort Sheridan, Ill., to Miss Elsie Lindbergh of DeKalb, Ill., at Chicago, April 8.

John Francis Fennessey, Capt., M. C., U. S. Army, Dorchester, Boston, to Miss Katherine T. Whalen of Brookline, Mass., April 22.

Malcolm McLean Morrison, Lieut., R. A. M. C., Los Angeles, to Miss Antoinette Miklau of San Francisco, at Los Angeles, April 4.

John Henry Ernest Fust, Lieut., M. C., U. S. Army, Carney's Point, N. J., to Miss Dorothy M. Cooke of Yonkers, N. Y., April 26.

Garrette Van Sweringen, Fort Wayne, Ind.; to Miss Mary E. MacDonald of Columbia City, Ind., at Fort Wayne, April 21.

John Edward Kelley, Capt., M. C., U. S. Army, to Miss Rose Ann Gahan, both of Chicago, April 26.

Ada Scott Conner Morton, San Francisco, to Robert Frederick Lewis, in New York, May 1.

Albert S. Lowenson to Miss F. Carlyn Hanline, both of Baltimore, April 30.

Emmet Francis Casey to Miss Elsa E. Singer, both of Chicago, January 8.

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Deaths

Grenville Mellen Weeks, Kearny, N. J.; New York University, New York City, 1861; aged 81; surgeon, U. S. Navy, and later major and surgeon and brigade surgeon of U. S. Volunteers and medical director of the district of Florida during the Civil War; who reentered the service in 1865 as surgeon and acting Indian agent during the Indian troubles in Minnesota and the Dakotas; author of the resolution recognizing Cuban independence, which was adopted by Congress in 1898; organizer and president in 1869 of the first Christian union, to urge a universal peace union of all creeds; died at the Soldiers' Home, Kearney, N. J., April 25.

Walter Stevenson Slicer ⊕ **Lieut., M. C., U. S. Army,** Roanoke, Va.; University College of Medicine, Richmond, Va., 1904; aged 38; who closed his hospital, known as Slicer's Hospital, Roanoke, July 1, 1918, to enter the Army and was in training in Fort Oglethorpe, Ga., and later was stationed at Base Hospital No. 124, Camp Hancock, Ga., and was honorably discharged from the Army, January 17; who was operated on for the removal of tonsils and adenoids, January 22; died twelve hours later from cerebral embolism.

William E. Lawrence ⊕ North Haverhill, N. H.; Baltimore Medical College, 1896; aged 47; medical referee for Grafton County; a specialist in tuberculosis; a member of the state constitutional convention in 1912, and a member on the state legislature in 1913 and 1914; formerly a trustee of New Hampshire state institutions; a trustee of Haverhill Academy and Woodsville Guaranty Savings Bank; died in the Woodsville Hospital, April 19.

Floyd S. Crego, Buffalo; Medical College of Ohio, Cincinnati, 1879; a member of the Medical Society of the State of New York; neurologist to Erie County, Emergency, Mercy and German hospitals, Buffalo; formerly professor of nervous and mental disease in the medical department of Niagara University; a member of the Buffalo Academy of Medicine, and a well known alienist; died at his home, April 23, from angina pectoris.

Pearl Tenney Haskell, Bangor, Me.; Bowdoin Medical School, Brunswick and Portland, Me., 1893; aged 50; a member of the Maine Medical Association; for two years assistant superintendent of the New Hampshire State Hospital, Concord, and from 1914 to 1917 assistant superintendent of the Maine State Hospital at Bangor, and since July, 1917, superintendent of the institution; died at his home, April 13.

Duncan R. MacMartin ⊕ Chicago; McGill University, Montreal, 1888; aged 57; a well known surgeon; associate professor of surgery in the Chicago Polyclinic; a member of the staff of the Polyclinic, St. Luke's and Henrotin hospitals; medical director of the American Bankers' Insurance Company; was found dead in his room in the Great Northern Hotel, April 30, from cerebral hemorrhage.

Herbert Martin Bishop, Los Angeles; Yale University, New Haven, Conn., 1865; aged 75; surgeon of the First Connecticut Volunteer Cavalry during the Civil War; once president of the California State Homeopathic Society; widely known as an amateur astronomer; died at his home, April 23.

Emmet V. Ball, Atlanta, Ga.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1894; aged 48; a specialist on diseases of the eye, ear, nose and throat; professor of laryngology and rhinology in his alma mater; died at his home, April 23, from heart disease.

Calvin Sloane May ⊕ New York City; Yale University, New Haven, Conn., 1873; aged 71; a member of the New York Academy of Medicine; at one time acting superintendent of the Connecticut Hospital for the Insane; died suddenly at his home, April 26.

Dwight Silliman, Hibbing, Minn.; New York University, New York City, 1866; aged 77; for many years a practitioner of Hudson, Wis., but since 1914 a resident of Hibbing; died at the home of his son in Hibbing, April 19, from cirrhosis of the liver.

Lucinda L. Combs Strittmatter, Columbus, Ohio; Woman's Medical College of Pennsylvania, Philadelphia, 1873; aged 70; a pioneer medical missionary in China, where she served from 1873 to 1881; died at the home of her son in Columbus, April 23.

Francis Joseph Giblin, Boston; Harvard Medical School, 1893; aged 51; a member of the Massachusetts Medical Society; formerly chairman of the medical staff of St. Mary's Infant Asylum, Dorchester, Boston; died at his home, April 13.

John William Hurley, Elizabeth, N. J.; New York University, New York City, 1882; aged 60; for three years an apothecary in the Navy; died at his home, April 15, from endocarditis following chronic articular rheumatism.

James Madison Lovelady ⊕ Sidney, Iowa; College of Physicians and Surgeons of St. Joseph, Mo., 1881; Missouri Medical College, St. Louis, 1887; aged 64; died at his home, April 3, from cerebral hemorrhage.

William Charles Langman, Cleveland; Eclectic Medical Institute, Cincinnati, 1898; aged 56; died in the Cleveland City Hospital, April 11, from injuries received March 3, when he was struck by an automobile.

C. Henry L. Bush, Woodville, Ohio (license, Ohio, 1896); aged 79; one of the incorporators of Woodville, and for several years a member of the board of education; died at his home, April 17, from uremia.

Benjamin G. Allen, Chattanooga, Tenn. (license, Tennessee, 1890); a practitioner since 1888; aged 49; a member of the Tennessee State Medical Association; died at his home, April 11.

Clyde Roy Rorabaugh, Seattle; Medico-Chirurgical College of Philadelphia, 1903; aged 39; a member of the Washington State Medical Association; died at his home, April 16.

Nathan Newby, Wichita, Kan.; Physio-Medical College of Indiana, Indianapolis, 1876; aged 77; a practitioner since 1869; died at his home, April 22, from cerebral hemorrhage.

Francis O. Lowe, Kewanee, Ill.; University of Illinois, Chicago, 1886; aged 57; a member of the Illinois State Medical Society; died at his home, April 27, from pneumonia.

Joseph Mark Kearney, Chicago; Rush Medical College, 1897; aged 44; formerly assistant physician at the Elgin State Hospital; died at his home, April 15, from pneumonia.

Chalmer Nathan Hatfield, Fostoria, Ohio; University of Illinois, Chicago, 1904; aged 42; a member of the Ohio State Medical Association; died at his home, April 22.

Alexander B. McCrea, Berwick, Pa.; Long Island College Hospital, Brooklyn, 1865; aged 81; a veteran of the Civil War; died at his home, April 12, from influenza.

Elias Hicks Trueblood, Salem, Ind.; Physio-Medical College, Cincinnati, 1885; aged 88; died at the home of his daughter in Salem, March 4, from senile debility.

Alfred J. Becker, Catasauqua, Pa.; Hahnemann Medical College, Philadelphia, 1885; aged 58; died at his home, April 16, after an operation for epiplopexy.

Marshal William Craton, Carrollton, Mo.; New York University, New York City, 1882; aged 62; died at his home, April 5, from cerebral hemorrhage.

Theodore B. Redmond, Danville, Ill.; Indiana Medical College, Indianapolis, 1875; aged 72; died at his home, April 18, from cerebral hemorrhage.

James Wardrope Ellis, San Jose, Calif.; New York University, New York City, 1882; aged 69; died at his home, March 3, from cerebral hemorrhage.

William Alexander Melton, Jr. ⊕ Warrensburg, Ill.; Northwestern University Medical School, Chicago, 1896; aged 56; died at his home, March 28.

Irénée Cier, Monroe, La.; Tulane University, New Orleans, 1898; aged 41; also a druggist; died at his home, April 17, from cerebral hemorrhage.

James W. Harris, New York City; United States Medical College, New York City, 1882; aged 71; died at his home, April 13, from pneumonia.

John W. Rutledge ⊕ Minneapolis; Medical College of Ohio, Cincinnati, 1875; aged 74; died at his home, February 24, from arteriosclerosis.

Joseph James Hartley, Richmond, Va.; Meharry Medical College, Nashville, Tenn., 1908; aged 42; was found dead in his home, March 21.

Edward Everett Dowdle ⊕ Silver City, N. M.; Hahnemann Medical College, Philadelphia, 1912; aged 31; died at his home, January 11.

Robert J. Arnold, Hampton, Ga.; Eclectic Medical Institute, Cincinnati, 1883; aged 56; died at his home, March 14, from pneumonia.

John H. Wilder ⊕ Hooks, Texas; Chattanooga (Tenn.) Medical College, 1893; aged 51; died in El Paso, Texas, April 20.

⊕ Indicates "Fellow" of the American Medical Association.

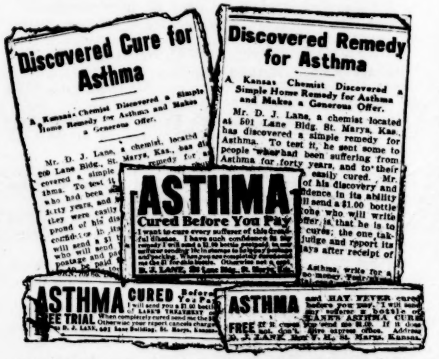
The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

LANE'S ASTHMA CURE

In certain cheap weeklies and in some not-too-particular newspapers, one may find advertisements in large black-faced type announcing: "Asthma Cured Before You Pay," in which D. J. Lane, St. Marys, Kan., offers to "send you a $1.25 bottle of Lane's Treatment on free trial." Other advertisements headed either "Discovered *Cure* for Asthma," or "Discovered *Remedy* for Asthma," as the advertising rules of the publication may require, assert that a "Kansas Chemist" has discovered a "simple home remedy for asthma" which has "easily cured" those "who had been suffering from asthma for forty years."

In earlier days, "Lane's Asthma Treatment" used to be "Lane's Asthma Cure," and long after the federal Food and Drugs Act was enacted, which penalizes false claims made on the trade package, the same false claims were made in other advertising paraphernalia—not subject to the law—which Lane used in his mail-order quackery.



Reproductions (reduced) of advertisements of Lane's Asthma Cure of various dates.

"Lane's Treatment" was purchased and submitted to the A. M. A. Chemical Laboratory. The chemists' report follows:

CHEMISTS' REPORT

"Lane's Treatment, Double Strength, for Asthma and Hay Fever," a specimen of which was recently examined in the A. M. A. Chemical Laboratory, was a brown liquid containing suspended matter, and having an aromatic odor and a bitter, gentian-like taste. The specific gravity of the liquid was 1.0471. "Twelve and a half per cent. of alcohol, or less," was declared on the label. Qualitative tests indicated the presence of alcohol, calcium, iodid, sugar and vegetable extractives. Most of the sugar present was in a form which directly reduced Fehling's Solution (such as glucose), although a small amount had the characteristics of sucrose (cane or beet sugar). In an older specimen, which had been in the A. M. A. files for some time, the sugar was wholly sucrose. No alkaloidal or emodin-bearing (laxative) drugs were present. Quantitative determinations gave the following results:

	Per Cent.
Alcohol, by volume	11.30
Calcium (Ca^{++}), by weight	0.59
Iodin (present as Iodid-I^-), by weight	3.26
Ash, by weight	2.05
Sugar (Direct Reduction calculated as dextrose), by weight	5.93
Total Sugar (After Inversion calculated as dextrose), by weight	6.36

The examination indicated that each 100 c.c. (approximately 3⅓ fluidounces) contained 11.3 c.c. (about four teaspoonfuls) of alcohol, 3.96 grams (60.8 grains) of anhydrous calcium iodid (CaI_2) and 6.66 grams (about 102 grains) of sugar, chiefly dextrose.

It will be seen by the chemists' report that Lane's "wonderful discovery for asthma" is essentially a solution of iodids in alcohol and water with vegetable extractives. Each dose of Lane's preparation contains approximately 2.5 grains of calcium iodid. This gives a daily dosage which is equivalent to 11.3 grains of potassium iodid. Iodids, of course, have been used for years by the medical profession in the treatment of certain forms of asthma. Under careful supervision the use of iodids in selected cases of asthma may give satisfactory results. Self-dosing with iodids, however, especially in cases in which the conditions may or may not indicate this drug, is by no means free from danger. Long continued use or overdosing may bring about symptoms of iodism with edematous conditions of the larynx that may seriously interfere with respiration, even to the point, occasionally, of necessitating tracheotomy and in rare instances, causing death. Even where the symptoms are not so severe there may be skin eruptions, frontal headache, sore throat, neuralgic pains, anemia, etc. It is hardly necessary to say that in the exploitation of Lane's nostrum there is no warning of such danger.

Correspondence

THE ADMINISTRATION OF ARSPHENAMIN

To the Editor:—It appears that there is a lamentable want of care on the part of many physicians who administer arsphenamin as to the concentration of the drug used and the time required for administration.

The Hygienic Laboratory receives many complaints in regard to untoward results from the administration of arsphenamin made by various American producers. When careful investigation is made it is almost invariably found that the drug has been used in a solution that is too concentrated, and that it has been administered too rapidly. We have reports of a dose of 0.4 gm. being given in a volume of as little as 25 c.c. and injected within thirty seconds. Such practice is abuse, not use, of a powerful therapeutic agent.

If, in addition to the usual precautions as to the use of perfect ampules and neutralization, physicians would give the drug in concentration of not more than 0.1 gm. to 30 c.c. of fluid and allow a minimum of two minutes for the intravenous injection of each 0.1 gm. of the drug (in 30 c.c. of solution) the number of reactions would be very materially reduced. This would necessitate from 30 to 180 c.c. of the solution for the doses usually given and would require from six to twelve minutes for the injection.

Any physician who fails to observe these precautions should be considered as directly responsible for serious results that follow the improper use of the drug.

G. W. McCoy, M.D., Washington, D. C.
Director, Hygienic Laboratory, U. S. P. H. S.

[NOTE.—The United States Public Health Service has issued a circular to its officers concerning the proper mode of administering these preparations. It is appropriate to reproduce this circular in connection with the letter of Dr. McCoy. Careful attention to the letter and the following points from the circular mentioned will undoubtedly reduce the number of reactions following the use of arsphenamin preparations.]

OPENING OF THE AMPULE

The ampule, before opening, should be immersed in 95 per cent. alcohol for fifteen minutes, so as to detect any crack or aperture not primarily recognizable. (Should such a breach be discovered, the contents of the ampule should be discarded.)

ARSPHENAMIN

(*1*) *Solution:* Cold, boiled, freshly distilled water should be used in all cases except in the case of "arsenobenzol" made by the Dermatological Research Laboratory, in which case hot water is required. No more solution should be prepared at one time than can be given in thirty minutes.

(2) *Neutralization and Alkalinization of the Above Solution:* With a graduated pipette or burette add 0.9 c.c. of normal NaOH for each 0.1 gm. of the drug (i. e., 5.4 c.c. for each 0.6 gm.). The alkali should be added all at once and should quickly convert the acid salt solution of arsphenamin into the alkaline salt solution, or the disodium of salt of the arsphenamin base The solution of arsenobenzol, which is hot, should be cooled before adding the alkali. This represents slightly more alkali than just enough to redissolve the precipitate formed by the addition of this reagent.

The alkali used should be standardized against normal acid. Normal NaOH is a 4 per cent. solution of the c.p. product. However, if made on the basis of weight, it may be considerably less than this strength, hence the necessity for titration. It could be made up in amount sufficient for a month's use, if kept in a well-stoppered bottle and exposed to the air for only a few seconds at a time when using the solution. It should be kept in a bottle that has been used for NaOH solution for some time so that all action it might cause on the glass has already occurred. Where it is impossible to have this made up at the station, it will be furnished on request from the Hygienic Laboratory. Should the NaOH solution become cloudy or contain a precipitate, it should be discarded.

(3) *Concentration of the Drug:* It is desired to emphasize the fact that the concentration of the drug should not be greater than 0.1 gm. to 30 c.c. of final solution. The practice of using concentrated solution is not only in direct conflict with the instructions on the circular, but carries a distinct hazard to the patient.

(4) *Method of Infection:* The gravity method only should be used. Where several patients are to be injected from the same solution, the container for the solution should be graduated. If not already graduated, this can be done in a few minutes by sticking on a strip of adhesive plaster and marking the graduations on this. A convenient way to do this is to have each mark represent 30 c.c. with a long mark for each 180 c.c.; then, if the volume is made up so that each 0.1 gm. of drug is contained in each 30 c.c., the doses can be given accurately. It is a great convenience to have a glass stopcock near the glass tubing which serves as a window just above the needle in order to control the rate of injection. If no stopcocks are at hand, the rate can be controlled by the size of the needle and the height of the column of fluid. A No. 18 or 20 B&S gage is the best size needle.

(5) *Rate of Injection:* Operators should pay particular attention to the rate of administration and in no case exceed 0.1 gm. of drug (30 c.c. of solution) in two minutes. This point is especially emphasized because it is believed that excessive rapidity of administration accounts for more unfavorable results in the use of arsphenamin than any other one thing.

NEO-ARSPHENAMIN

The principal precautions to be observed in the administration of neo-arsphenamin are:

(1) But a single ampule should be dissolved at a time. This drug must not be dissolved in bulk to be given to a series of patients.

(2) Cold water only should be used.

(3) The dilution should be not stronger than 0.1 gm. of the drug in 2 c.c. of freshly distilled water.

(4) A very small needle should be used, and the time of injection of the dose should be not less than five minutes.

SMITH COLLEGE TRAINING SCHOOL FOR SOCIAL WORK

To the Editor:—May I call the attention of your readers to a new opportunity for the intensive training of medical-social workers—the new Smith College Training School for Social Work?

Every hospital of importance in the country now employs or knows it ought to employ social workers to attend to that fringe of nonmedical needs that surrounds certainly 40 per cent. of the patients in free hospitals. Medical problems are so closely enmeshed with mental, moral, financial, industrial, racial and domestic problems, that we really cannot cure most of our hospital patients (and especially outpatients) without the help of the right sort of woman who will help us to understand and to mitigate the mass of ignorance, fear, bad habit, resourcelessness and poverty which still weigh them down even after they have been scientifically diagnosed and treated.

Such a woman must first be born to the job and then trained for it. The training referred to above begins this summer, and as chairman of the Advisory Committee on this work at Smith College, I want to make known its opportunities as widely as I can. I will answer or get answered any inquiries regarding it.

RICHARD C. CABOT, M.D., Boston.

IDENTITY OF THE POPPY IN FLANDERS FIELDS

To the Editor:—The inquiry concerning the nature of the poppies in "Flanders Fields" leads me to call attention to the fact that these flowers have been a feature of the region for centuries, for Macaulay, in his History of England, in speaking of the battle-field of Landen (during the reign of William III of England), says: "The next summer the soil, fertilized by twenty thousand corpses, broke forth into millions of poppies. The traveler who, on the road from St. Tron to Tirlemont, saw that rich sheet of scarlet spreading from Landen to Neerwinden could hardly help fancying that the figurative prediction of the Hebrew prophet was literally accomplished; that the earth was disclosing her blood and refusing to cover the slain."

HENRY LEFFMANN, M.D., Philadelphia.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

PEPSODENT

To the Editor:—Please give me an opinion concerning the dentifrice "Pepsodent." It seems very gritty to me, and I wonder whether the abrasive used will not be injurious to the teeth. The manufacturer claims it to be precipitated calcium phosphate. The pepsin contained is said to be "activated" by some agent other than an acid. A recommendation by the Carr School of Preventive Dentistry and Medicine at 30 N. Dearborn St., Chicago, is published. Is it a school whose recommendation is authoritative?

EARL H. CORNELL, Oakland, California.

ANSWER.—The keynote of the "Pepsodent" advertising is the claim that, used as a dentifrice, it will digest or dissolve the dental mucin plaques through the action of pepsin which has been incorporated in the paste. The acid medium necessary for the activation of the pepsin is claimed to be acid calcium phosphate; the abrasive substance said to be used is tricalcium phosphate. Pepsodent has been exhaustively studied by Dr. William J. Gies and his collaborators in the Biochemical Laboratory of the Schools of Medicine and Dentistry of Columbia University. Dr. Gies in a letter published in THE JOURNAL, April 28, 1917, briefly summarizes the findings of this investigation. Regarding the alleged digestive powers of Pepsodent, Dr. Gies wrote:

> "We have found that none of these digestive claims is warranted in any degree. 'Pepsodent' is devoid of the digestive power on dental mucin plaques that is commercially ascribed to it. Mucin plaques cannot be digested from teeth by any advertised use of 'Pepsodent.' There is about as much common sense in the proposed application of 'Pepsodent' for this purpose as there is in the oral administration of a few grains of lactopeptin to improve impaired tryptic digestion in the intestine."

A complete report of the investigation of Dr. Gies and his collaborators appeared in *The Journal of the Allied Dental Societies*, September, 1917. The investigation showed that the acidity of Pepsodent is due largely, if not entirely, to acid calcium phosphate. The claim by the Pepsodent concern that the use of this preparation stimulates the production of saliva is true. It does stimulate the flow of saliva to an extent that speedily neutralizes the very feeble acid present

in Pepsodent. Thus, any possible influence that this "acid" might otherwise exert is, as Dr. Gies says, "promptly and completely nullified." As to whether the abrasive used in Pepsodent is injurious to the teeth, Dr. Gies reported that it appeared "to be devoid of harmful mechanical influence on dental enamel" in the ordinary use of the preparation as a dentifrice. He added: "We are not positive on this point, however."

The "Carr School of Preventive Dentistry" seems to be operated by one C. M. Carr, who has invented a set of dental instruments, and has devised what seems to be called the "Carr Treatment." The treatment and the instruments it appears are for use in cases of pyorrhea alveolaris. According to the catalog, the "Course of Prevention, including the cure of Pyorrhea" is completed in four weeks and costs $175. A call at 30 North Dearborn Street disclosed empty rooms where the "Carr School of Preventive Dentistry" had been. Inquiry as to where the "school" now is evoked the enigmatical reply that it was "going out West for a few months."

MORTALITY FROM TUBERCULOSIS IN JAPAN—LACTATION IN JAPANESE WOMEN — DAIRYING IN JAPAN

To the Editor:—1. Is it true that the mortality from tuberculosis in Japan is very low—much lower than in the United States? 2. Do the Japanese children nurse until they are five or six years old? 3. Is Japan a cowless nation?

M. E. J., Calif.

ANSWER.—1. According to the 1911 report of the Imperial Japanese Institute for Infectious Diseases the number of soldiers and sailors discharged each year on account of tuberculosis has markedly increased in recent years. According to the reports of various life insurance companies, out of 100 deaths from 20 to 25 per cent. were due to tuberculosis. Reports from textile factories show a relative mortality of from 25 to 43 per cent., silk factories having the heaviest mortality. According to the statistics of the three years 1906-1908, 30 per cent. of all deaths among factory workers were due to pulmonary tuberculosis, 12 per cent. to diseases of a seemingly tuberculous nature, and 6.4 per cent. to tuberculosis of other organs than the lungs. Accordingly nearly 50 per cent. of all deaths were in some way connected with tuberculosis. It is stated in the report of the Imperial Japanese Institute that the mortality from tuberculosis in Japan seems to agree closely with the results of the investigations made by Baumgarten and Orth in Germany. The incidence of tuberculosis in Japan does not therefore seem to differ materially from that in the United States.

2. Japanese women are noted for their ample supply of milk, although this is said to be on the decrease in recent years. They often nurse their children three years and over—even seven years occasionally. The reason commonly assigned is peculiar, namely that the Japanese mother thinks that by nursing her child for so long a period she gains better control over the child, not only during the actual period of lactation but during the following years, as well.

3. Japan is fairly well supplied with dairy cattle. It is, however, doubtful if the quality of the herds ranks as high as in Switzerland, Denmark and some portions of our own country. The reasons for the long nursing of children are not to be sought in the scarcity of cows but rather in the peculiar ideas that the Japanese entertain of the family.

CESSPOOLS, INFECTED VEGETABLES AND TYPHOID

To the Editor:—1. Will you kindly give me some information concerning cesspools? Have typhoid epidemics been traced to this source? 2. Is it true that cases of typhoid have been traced to vegetables that have been fertilized with night soil?

A. E.

ANSWER.—1. There is no doubt that a proper mode of disposal of human excrement by water carriage leads to a reduction in the amount of typhoid fever. Chapin states that in Providence, R. I., the disease fell off 40 per cent. after most of the privy vaults were abolished. Many other American cities and also many English cities have had similar experience. A number of references are given by Chapin in "Sources and Modes of Infection" (John Wiley & Sons, New York, 1912), p. 180. 2. With regard to the possibility of typhoid infection through vegetables, a discussion of this subject with references and a report of original work has been given by Melick (*J. Infect. Dis.* **21**:28-38, 1917).

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARKANSAS: Little Rock, May 13. Sec. Eclectic Bd., Dr. C. E. Laws, 803½ Garrison Ave., Ft. Smith; Sec. Regular Bd., Dr. T. J. Stout, Brinkley.

CALIFORNIA: San Francisco, June 23-26. Sec., Dr. Charles B. Pinkham, 904 Forum Bldg., Sacramento.

DELAWARE: Wilmington, June 17-19. Sec., Dr. H. W. Briggs, 1026 Jackson St., Wilmington.

FLORIDA: Jacksonville, June 16-17. Sec., Dr. W. M. Rowlett, Citizens Bank Bldg., Tampa.

GEORGIA: Atlanta and Augusta, June 5-6. Sec., Dr. C. T. Nolan, Marietta.

HAWAII: Honolulu, May 12. Sec., Dr. J. R. Judd, Beretania St., Honolulu.

ILLINOIS: Chicago, June 16-19. Supt. of Registration, Mr. F. C. Dodds, Springfield, Ill.

KANSAS: Topeka, June 17. Sec., Dr. H. A. Dykes, Lebanon.

MASSACHUSETTS: Boston, May 13-15. Sec., Dr. Walter P. Bowers, Room 501, No. 1 Beacon St., Boston.

MICHIGAN: Ann Arbor, June 10-12. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

MINNESOTA: Minneapolis, June 3-6. Sec., Dr. T. S. McDavitt, 741 Lowry Bldg., St. Paul.

MISSISSIPPI: Jackson, June 24-25. Sec., Dr. W. S. Leathers, University.

MISSOURI: St. Louis, June 9-11. Sec., Dr. George H. Jones, State House, Jefferson City.

NATIONAL BOARD OF MEDICAL EXAMINERS: Philadelphia, June 2-7. Sec., Dr. J. S. Rodman, 1310 Medical Arts Bldg., Philadelphia.

NEW JERSEY: Trenton, June 17-18. Sec., Dr. Alex. MacAlister, 438 E. State St., Trenton.

NEW YORK: Albany, Buffalo, New York and Syracuse, May 20-23. Mr. George M. Wiley, director, Exam. and Inspections Div., State Edu. Bldg., Albany.

NORTH CAROLINA: Raleigh, June 23. Sec., Dr. H. A. Royster, 423 Fayetteville St., Raleigh.

OHIO: Columbus, June 3-6. Sec., Dr. H. M. Platter, State House, Columbus.

SOUTH CAROLINA: Columbia, June 10. Sec., Dr. A. Earle Boozer, 1806 Hampton St., Columbia.

TENNESSEE: Knoxville, Memphis and Nashville, June 13-14. Sec., Dr. A. B. De Loach, Exchange Bldg., Memphis.

TEXAS: Austin, June 24-26. Sec., Dr. M. F. Bettencourt, Mart.

VERMONT: Burlington, June 26-28. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 17-20. Sec., Dr. J. W. Preston, 215 S. Jefferson St., Roanoke.

WISCONSIN: Milwaukee, June 24-26. Sec., Dr. J. M. Dodd, 220 E. 2nd. St., Ashland.

GRADUATE MEDICAL INSTRUCTION IN LONDON

The *British Medical Journal* of March 8, 1919, contains an editorial referring to an article by Sir Wilmot Herringham on medical education in London.

This article compares the "hopelessly deficient" postgraduate instruction in London with the "attractions" Vienna and Berlin possessed when they were drawing medical graduates from all over the world. These attractions of Vienna and Berlin in substance are given as follows:

(*a*) Coaching classes, which are given by men who are unquestionably well qualified since they are those who are in line for professorial chairs.

(*b*) Opportunities for gaining skill in the use of clinical instruments, such as the laryngoscope, otoscope, ophthalmoscope, etc.

(*c*) The possibility of obtaining an appointment as assistant to a professor of surgery, thereby gaining a large experience in operations.

(*d*) The chance of obtaining a place in a professor's laboratory, where, although the work might be monotonous, he would learn the methodical system of work for which the German was justly famed.

(*e*) The uniformly instructive lectures given by the professors (as compared with the average lecture given in London).

The enumerating of these "attractions" in Vienna and Berlin was evidently intended to reveal in contrast the needs of postgraduate education in London.

A special difficulty in the development of graduate education in London is shown to be the development in the middle of the nineteenth century of a large number of special hospitals, due to the fact that "specialism was disdainfully regarded by most teachers in the medical schools." The writer shows that "something was due to the public, who insisted on having specialists," but that every department of

medicine was growing so complex that "no man could any longer pretend to be expert in them all." The consequence was that all large general hospitals had special departments and the Royal Society of Medicine had thirteen special sections. The editorial states, however, that there has come to be a general recognition of the need for specialization in practice, the result of which is "that the chief special hospitals are now largely staffed by men who are members also of a staff of a school hospital."

It is stated that in making plans for postgraduate courses, which are about to be resumed in Edinburgh, the committee has arranged to pool the hospital resources. The courses will be held at four large hospitals, and "the members will hold temporary appointments as assistant demonstrators in the practical courses and as clinical assistants in the wards and special hospitals."

In the emergency facilities provided in London through a fellowship of medicine, all medical school hospitals are included, as well as a like number of special hospitals. "The instruction referred to will include general courses and special courses." By the latter is meant courses in certain classes of disease, for example, disorders of digestion. "After attending a special course the graduate would be eligible for research work in the subject or to hold a post as clinical assistant," a plan not hitherto commonly carried out. Attention is called also to "the necessity of opening clinical appointments in London to stranger graduates," and "the establishment of a special graduate hospital to which all the resident and junior appointments would be held by the visitors to London" is favored. The editorial urges that three points be more fully considered, namely, (*a*) the desirability of arranging graduate courses at teaching hospitals; (*b*) the best way of utilizing special hospitals, and (*c*) the opening of clinical appointments to graduates. The editorial concludes that "the proposed graduates' association will need a building in central London containing offices for the secretarial staff, a library, and recreation and luncheon rooms. At this center the business of the proposed permanent association would be conducted, fees would be received and paid and information supplied to graduates attending or desiring to attend the courses."

Case Records and Their Use

Two pamphlets dealing with hospital case records and forms have been issued recently by the American College of Surgeons.[1] One emphasizes the importance of keeping proper records in a hospital, explains in detail why they are important and gives suggestive outlines showing what might be included in such records. Records are shown to be the best means by which an accurate check can be kept on the various members of the hospital staff and by which faulty methods may be traced and promptly corrected. The other pamphlet suggests forms of blanks which may be used for recording the personal history and the physical examination, forms to be used in the various specialties, blanks for recording laboratory findings and treatment, and a temperature chart. A form for a summary card is also suggested, which is intended to be filled out after the patient has left the hospital, and by means of which the end results may be reviewed without revealing the name of either the physician or the patient. These pamphlets should have a wide distribution among hospitals and will doubless be of much value.

District of Columbia January Examination

Dr. Edgar P. Copeland, secretary of the Board of Medical Supervisors of the District of Columbia, reports the oral and written examination held at Washingon, Jan. 14-16, 1919. The examination covered 16 subjects and included 80 questions. An average of 75 per cent. was required to pass. Seven candidates were examined, all of whom passed. Four candidates were licensed through reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
George Washington University	(1916)	82.4; (1917)	75.5, 83.5; (1918) 81; 86.4.
University of Maryland	(1918)		85.7
Hahnemann Med. Coll. and Hosp. of Philadelphia	(1918)		80.2

College	LICENSED THROUGH RECIPROCITY	Year Grad.	Reciprocity with
Georgetown University		(1898)	Virginia
Howard University		(1912)	Virginia
University of Maryland		(1913)	Georgia
Starling Medical College		(1892)	Ohio

1. Bulletin American College of Surgeons, 4: Nos. 1 and 2.

Book Notices

WAR SURGERY OF THE ABDOMEN. By Cuthbert Wallace, C. M. G., F. R. C. S., M.B., Surgeon St. Thomas' Hospital. Cloth. Price, $3 net. Pp. 152, with 26 illustrations. Philadelphia: P. Blakiston's Son & Co., 1918.

This little monograph of 150 pages contains "the experiences of abdominal surgery of a sector of the battle line over a period of thirty months" and "is founded on the practice of many surgeons working under different conditions and in different hospitals. The personal equation and influence of locality have thus been largely eliminated."

There is really little fundamental difference between war surgery and peace surgery. "It is a question as to whether war conditions allow the surgeon to apply the principles that he knows to be right." "War surgery is largely concerned in overcoming adverse circumstances and in striving to make war conditions as much like peace conditions as possible." War does not change the principles of surgery, it only changes the conditions under which the principles must be applied, and as the conditions are often such as to make it impossible to follow the best surgical methods, one must learn to do the best one can under the conditions present, and that is war surgery.

The question as to whether wounds of the abdomen should be operated on or not is thoroughly discussed. The evidence presented shows conclusively that it is not so much a question of procedure as it is a question of time and conditions. Because a man recovers after a bullet wound traversing the abdomen is no evidence that any of the hollow organs were injured. On the contrary, the fact that he recovered is almost certain evidence that none of the hollow organs was injured. That a bullet may traverse the abdominal cavity in any direction and not injure the hollow viscera is well shown by the remarkable chart, Figure 6. This chart ought to convince anyone of the necessity of being most conservative in claiming that bullet wounds of the intestinal tract may heal spontaneously. Patients that recover spontaneously after a bullet wound of the stomach or intestine are exceedingly few indeed. "Experience has shown the wisdom of operating as a routine measure, and it is now mainly a question of excluding the cases on which it is best not to operate.

"On the whole 'look and see' is a better maxim than 'wait and see.'"

After discussing the subject in general, wounds of particular organs are taken up more in detail. Many interesting tables showing number, location, and character of wounds, with results of treatment, are appended.

THE HEARTS OF MAN. By R. M. Wilson, M.B. Cloth. Price, $2. Pp. 182, with 117 illustrations. New York: Oxford University Press, 1918.

Quoting from the preface, we find "the prime object of the book is to encourage investigation into certain phenomena of the circulation and of the nervous system which have not hitherto been clearly investigated from the purely clinical standpoint—for example, the mechanism of breathing in effort and at rest, the meaning and effect on the general circulation of the great blood lakes of the skin, abdomen and lungs." Certain new notions the result of clinical observation are advanced in the sixteen chapters. These deal with such topics as reaction breathing, the function of the abdominal wall in reaction breathing, rest breathing, the ductless glands and the reaction state, the effects of epinephrin, the vagus—nerve of diastole, etc. Many of these ideas will need confirmation before they can be generally accepted but they are suggestive, stimulating and well worth careful consideration.

Medicolegal

Rulings and Distinction as to Liability of Hospital

(Morton v. Savannah Hospital (Ga.), 96 S. E. R. 887, 888)

The Supreme Court of Georgia, in answering questions certified to it from the court of appeals, holds, first, that the Savannah Hospital, chartered by the general assembly and invested with "all the powers, rights, privileges and liabilities incident to a corporation," is authorized and empowered to conduct an institution eleemosynary in character for the public benefit. It was not the intention of the legislature that the business so conducted might be for the pecuniary gain or benefit of its managers, officers or others.

The next question was: If the intention of the legislature was to charter said corporation for charitable purposes only, would such intention, as expressed in or to be gathered from the charter itself, fix and determine its nature and character as an eleemosynary institution, in a suit brought against the corporation by a patient on account of the alleged carelessness and incompetence of a nurse and of a servant employed by the hospital, and on account of the failure of the hospital and of the superintendent under whose charge it was operated to remove such incompetent nurse after her incompetence became known and prior to the injury, notwithstanding allegations in the petition of the plaintiff in said action that "the said Savannah Hospital, conducted at Savannah, Ga., a hospital for pecuniary gain, and the greater portion of said hospital was set aside by its officers for the reception and treatment of patients who were charged for its services and who paid for the same"? The answer is that the intention of the legislature in chartering the Savannah Hospital is fixed and determined by the acts of the general assembly. In a suit brought against the corporation by a patient, as stated in this question, the charter provisions are controlling, notwithstanding allegations in the petition of the plaintiff as stated above.

Then the question was propounded whether, if the Savannah Hospital was chartered as a charitable institution, but nevertheless the greater portion thereof was set aside by its officers and superintendent for the treatment of patients who paid for the services they received, would this state of facts render the corporation liable to one who entered the hospital as a patient under an agreement to pay a stated sum for all necessary care, nursing, attention, control, oversight and medical treatment suitable or appropriate to her condition, for any injuries resulting to such patient on account of the negligence, carelessness or incompetence of the officers and agents of the corporation? The answer is that, under circumstances as just enumerated (although the hospital is a charity, and the general rule is that charitable funds are not to be depleted by subjection to liability for negligence), the corporation would be liable; but a recovery would be limited to the extent of income derived from treatment of patients who paid for services. With the exception just stated, an incorporated hospital, primarily maintained as a charitable institution, is not liable for the negligence of its officers and employees, unless it fails to exercise ordinary care in the selection of competent officers and servants, or fails to exercise ordinary care in retaining such officers and employees.

Where a patient in such an institution is not the recipient of its charity, but is able to pay and does pay for the services, and is injured on account of carelessness, negligence or incompetence of an officer or employee of the institution, the corporation is liable therefor; but the judgment can subject only funds derived strictly from noncharitable pay patients, and for this purpose the petition need not allege that the corporation failed to exercise ordinary care in the selection of its officers and employees or in retaining them. A judgment so recovered will not subject funds in trust for charitable purposes, unless the petition alleges that the corporation failed to exercise ordinary care in the selection of its officers and employees, or in retaining them.

Following the decision by the supreme court is one by the Court of Appeals of Georgia, Division No. 1 (on page 888), which says that, under the answers made by the supreme court, it appears that the trial judge erred in sustaining a general demurrer to the plaintiff's petition, and therefore his judgment must be reversed. Moreover, anything in the decision in *Medical College* v. *Rushing*, 1 Ga.App.468, 57 S. E. 1083, which may be in actual conflict with the holdings of the supreme court in this case, will not be followed.

Fraud in Hypnotic Treatment of Insane Delusions

(Roesler v. Shastri (Wis.), 169 N. W. R. 282)

The Supreme Court of Wisconsin reverses a judgment that was rendered on a verdict directed for the defendant, and remands for a new trial this case in which the plaintiff sought by replevin to recover a bank draft for $950 alleged to have been obtained from him through fraudulent representations by the defendant. The court says that the plaintiff was a farmer whose wife had been suffering from insane delusions for thirteen or fourteen months and had been at a hospital three times. He engaged the defendant to treat her. He testified that the defendant held himself out as a doctor, and was called such, and it appeared that the defendant had used the title M.D. on his letter heads; that he represented that he could by the use of hypnotic influences cure the plaintiff's wife, but that he must first destroy her mind, and make it like a child's and then build it up again. He assured the plaintiff that he could cure her, but he had to have $50 per day. At the end of twenty days the defendant said she was cured 50 per cent., but that he could not stay longer, and was given the draft and $50 in cash. It appeared that the defendant was a native of India; that he had been educated as a physician in the University of Binjab, and had pursued some medical studies in Chicago and Los Angeles, obtaining a medical degree from the latter school; but he had not been licensed to practice in the United States. He claimed that he used hypnotic suggestion only in his treatment of the plaintiff's wife, and denied that he had said that he could cure her.

The supreme court thinks it was error to direct a verdict in this case. It was a question for the jury to say whether or not plaintiff was deceived by the defendant. The jury had a right to believe the plaintiff's testimony, and to draw the conclusion therefrom that he was defrauded of his money. He had an insane wife; that he was anxious to cure her was evidenced by the fact that he willingly paid $50 a day in an effort to do so. He was undoubtedly ignorant of what could or could not be done through mental healing or hypnotic suggestion. There is a sharp conflict of views on that subject by those who have given it study and attention. That he did not know was not strange. Neither was it strange that he was unable to diagnose the exact or relative condition of his wife's mind at the time the draft was delivered. He had been told that her mind must first be wholly destroyed, and then built up, and he evidently believed that. The law protects the ignorant and credulous, as well as the wise and wary. He was told by the defendant, when the latter received the draft, that her mind was 50 per cent. cured, and that the nurse could take care of her afterward. We employ doctors to diagnose disease, and to cure it or direct us what to do to effect a cure. That is their profession. When they give advice, the patient is justified in following it, unless it is so palpably contrary to sense or human experience as to be disbelieved by every one.

There was sufficient evidence in this case to warrant the jury in finding that the defendant held himself out as a doctor. A letter from him to the nurse, which was shown to the plaintiff, with the heading "K. D. Shastri, M.D." and was signed "K. D. Shastri, M.D." He was called doctor, and made no protest. The fact that he was not required (in Wisconsin) to be licensed to heal by mental science or hypnotic suggestion was immaterial on the question of actual fraud. An unlicensed person may make fraudulent representations.

The plaintiff should have been permitted to show by other doctors, if he could, that the treatment given his wife by the defendant was injurious, and not beneficial. It was true that the defendant's counsel on the trial admitted that she was

neither cured nor benefited. But the plaintiff's offer went farther. He offered to prove that she had been injured by the treatment. Such proof was pertinent on the issue of fraud and should have been admitted.

Claim was made that since, in delivering the draft to the defendant, the plaintiff parted with the legal title thereto, he could not maintain replevin to recover it; but this court has several times negatived that claim, and held that replevin will lie to recover goods obtained by fraud.

Witness Fees Under Workmen's Compensation Act

(Nelson v. Industrial Insurance Department (Wash.), 176 Pac. R. 15)

The Supreme Court of Washington modifies, as to the fees allowed a medical witness, a judgment that granted an award as for permanent partial disability for practical total loss of vision in the left eye. The court says that the trial judge allowed a fee of $45 to one of the medical witnesses who came from Portland, Ore., to attend the trial. It was contended that this allowance was proper under the provision of the statute that the court may allow an attorney's fee, "and the fees of medical and other witnesses and the costs shall be payable out of the administration fund, if the accident fund is affected by the litigation." But there is no provision of the law that will warrant the payment of extraordinary fees to expert witnesses as such; and the supreme court thinks that it is hardly within any rule of statutory construction to say it was the intention of the legislature to leave the fixing of witness fees to the discretion of the court. Being dependent on the statute, costs and witness fees are never to be allowed in the discretion of the trial judge, in the absence of a positive or permissive statute. It will be observed that the only discretion given to the court in the allowance of costs on appeal from an order of the department is that the trial judge may fix a reasonable attorney's fee and "such (reasonable) fee, and the fees of medical and other witnecesses . . . shall be payable," etc., plainly indicating that it was the intent of the legislature to associate medical witnesses with "other witnesses" and not with the attorney whose service is independent of the witnesses, and for which no fee is provided by law. This court has heretofore refused to extend the terms of this statute by construction. It follows that the judgment of the lower court should be modified to this extent.

Requirements for Revocation of Licenses

(Blunt v. Shepardson et al. (Ill.), 121 N. E. R. 263)

The Supreme Court of Illinois says that the power given by the civil administrative code to the department of registration and education to revoke a license to practice medicine is not arbitrary. The department cannot act except for cause shown, on notice and hearing and with an opportunity to defend. Its power to revoke the license of a medical practitioner cannot be exercised except on the action and report in writing of a majority of the five reputable physicians licensed to practice medicine and surgery in this state designated from time to time by the director of registration and education for that purpose. According to the petition in this case, no such report in writing was ever made; at least, no notice was ever given to the petitioner. He was simply advised by letter that reports of unprofessional conduct on his part had reached the board and told verbally that it had been reported to the board that he had been found guilty of violating the Harrison drug act. There was no charge, no hearing, and the letter announcing the revocation of his license did not state for which of the reasons mentioned in the medical practice act his license had been revoked or whether for any or no reason. The evidence of the granting and revocation of licenses cannot rest in parol, or verbal statements. The record must be preserved, and it is essential to the validity of an order revoking a license that it shall show the facts essential to the jurisdiction of the department. On the showing made by the petition in this case, a writ of certiorari should have been awarded to bring before the court the record of the proceedings of the department of registration and education, and its issuance is directed.

Society Proceedings

COMING MEETINGS

American Medical Association, Atlantic City, June 9-13.

American Academy of Medicine, Atlantic City, June 9-10.
American Association of Anesthetists, Atlantic City, June 9-10.
Am. Assn. of Genito-Urinary Surgeons, Atlantic City, June 16-17.
Am. Assn. of Indust. Physicians and Surgeons, Atlantic City, June 9.
Am. Assn. of Pathologists & Bacteriologists, Atlantic City, June 16-17.
American Association of Physicians, Atlantic City, June 16-17.
American Climatological & Clin. Assn., Atlantic City, June 16-18.
American Dermatological Association, Atlantic City, June 16-18.
American Gynecological Society, Atlantic City, June 14.
American Medico-Psychological Assn., Philadelphia, June 18-20.
American Neurological Association, Atlantic City, June 16-18.
American Ophthalmological Society, Atlantic City, June 16-17.
American Orthopedic Association, Atlantic City, June 16-17.
American Otological Society, Atlantic City, June 16-17.
American Pediatric Society, Atlantic City, June 16-18.
American Proctologic Society, Atlantic City, June 7-9.
American Psychopathological Association, Atlantic City, June 19.
American Society of Tropical Medicine, Atlantic City, June 16-17.
American Surgical Association, Atlantic City, June 16-18.
American Therapeutic Society, Atlantic City, June 6-7.
Arizona Medical Association, Globe, June 2-3.
Arkansas Medical Society, Little Rock, May 20-22.
Assn. of American Peroral Endoscopists, Brooklyn, June 5.
Assn. for the Study of Internal Secretions, Atlantic City, June 9.
Congress American Phys. & Surgs. of N. A., Atlantic City, June 16-17.
Connecticut State Medical Society, Bridgeport, May 21-22.
Florida Medical Association, Miami, May 20-22.
Illinois State Medical Society, Peoria, May 20-22.
Maine Medical Association, Portland, June 18-19.
Massachusetts Medical Society, Boston, June 3-4.
Michigan State Medical Society, Detroit, May 21-22.
Mississippi State Medical Association, Hattiesburg, May 13-14.
Missouri State Medical Association, Excelsior Spgs., May 26-28.
National Assn. for Study of Epilepsy, Sonyea, N. Y., June 6-7.
National Tuberculosis Association, Atlantic City, June 12-14.
Nebraska State Medical Association, Lincoln, May 19-21.
Nevada State Medical Association, Lake Tahoe, June 20-21.
New Hampshire Medical Society, Concord, May 14-15.
New Jersey Medical Society, Spring Lake, June 24-25.
North Dakota State Medical Association, Grand Forks, June 18-19.
Oklahoma State Medical Society, Muskogee, May 20-22.
Rhode Island Medical Society, Providence, June 5.
Southern Minnesota Medical Assn., Rochester, June 30-July 1.
Texas State Medical Association, Waco, May 13-15.
Western Roentgen Society, Cleveland, June 5-6.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Albany Medical Annals

April, 1919, **40**, No. 4

Physical and Mental Condition of Delinquent Boys. C. P. McCord, Albany.—p. 101.

American Journal of Diseases of Children, Chicago

May, 1919, **17**, No. 5

*Cystoscopic Study of Urologic Conditions in Children. F. Hinman, San Francisco.—p. 306.

Studies on Mammary Gland: V. Effects of Inanition on Developing Glands in Male and Female Albino Rats from Birth to Ten Weeks of Age. J. A. Myers, Minneapolis.—p. 311.

Recovery of Normal Weight in Various Organs of Albino Rats on Refeeding After Underfeeding from Birth for Various Periods. C. M. Jackson and C. A. Stewart, Minneapolis.—p. 329.

Measurements of 250 Full-Term New-Born Infants. R. Taylor, Minneapolis.—p. 353.

Cystoscopy in Children.—The findings of twenty-six cystoscopic studies done on children are reported by Hinman. The youngest patient was a girl, 11 months of age. Of twelve cases of pyuria in girls, six were acute or subacute infections and six chronic. In three of the acute and three of the chronic cases, infection was limited to the bladder; microscopic and cultural studies of the catheterized kidney urines were negative. There was cystoscopic evidence of bladder inflammation in all twelve cases. Infection was confined to the left side in two and was bilateral in four of the six

pyelites. The total phenolsulphonephthalein was normal in all. *B. coli-communis* was cultivated from the urine in all but one case in which a pure staphylococcus was secured. In all of the ureteral catheterizations silver nitrate in strengths of 0.25 to 2 per cent. was used as pelvic lavage before the withdrawal of the catheters. Calculus formation was recognized four times, left nephrolithiasis in a boy of 4 years (with congenital posterior urethral valve), large urethral calculus in a boy of 5 and large bladder stones in boys of 3 and 4 years, respectively. Acute hemorrhagic nephritis occurred in two girls of 6 and 10 years. Urologic investigation with diagnosis was made of a large retroperitoneal sarcoma, a large hypernephroma and an insufficient horseshoe kidney, all of these patients coming to operation or necropsy. Three small boys, aged 3, 4 and 5 years, with symptoms of prostatism and residuals of 80, 320 and 110 c.c., have been subjected to examinations (the youngest required external urethrotomy), which revealed valvelike obstructions in the posterior urethra. Hinman emphasizes that a complete urologic study (cystoscopy and ureteral catheterization) is technically possible in children irrespective of sex or age, and that he has not met with any untoward consequences or disagreeable complications. The results in every instance have justified the procedure.

Annals of Surgery, Philadelphia

March, 1919, **69**, No. 3

*Formation of Bone: The Osteoblast. L. W. Ely, San Francisco.—p. 225.
*Repair of Cranial Defects. G. E. Wilson, Toronto.—p. 230.
*Lesions Observed in Operations for Old Injuries to Spinal Cord. C. A. Elsberg, New York.—p. 239.
*Diagnosis and Therapy of Bone Typhoid. G. Bohmansson, Oerebro, Sweden.—p. 245.
Diaphragmatic Hernia: Report of Case. A. L. Soresi, New York.—p. 254.
Gas and Motility of Surgical Stomach. W. H. Barber, New York.—p. 271.
*Fatty Hernias: Report of Case of Strangulated Fatty Hernia Enveloping Empty Femoral Sac. K. Hale, Wilmington, Ohio.—p. 278.
*Anuria After Unilateral Nephrectomy. L. Frank, Louisville, Ky.—p. 286.
*Adhesive Plaster Method for Rapid Regeneration of Skin Over Granulating Wounds. E. G. Beck, Chicago.—p. 291.
*Experimental Research on Effect of Intravenous Injection of Gum Salt Solutions. P. H. DeKruif, U. S. S. C.—p. 297.
*Treatment of Burns. A. L. McDonald, Duluth, Minn.—p. 312.
Initial Treatment of War Wounds Involving Knee Joint. C. R. Metcalf.—p. 318.
*Case of Suppurating Cyst of Urachus, with Concretion. W. G. Ward, East Lynn, Mass.—p. 329.

Formation of Bone by Osteoblast.—The neoplastic theory of bone formation is endorsed by Ely. The osteoblast is the bone-building cell. Neither periosteum nor marrow is necessary for bone formation; neither of them forms bone, in the proper meaning of the word. In each tissue the conditions are right for bone formation. The materials are there, and, given the stimulus, physiologic or pathologic, bone will be manufactured out of the fibrous tissue of the periosteum, or out of the fibrous or cartilaginous tissue in the marrow. The presence of bone is to a certain extent a stimulus for further bone formation. The true marrow cells, the characteristic marrow cells, probably have no function in bone building whatever.

Repair of Cranial Defects with Rib Transplants.—In the cases reported by Wilson, pieces of rib and cartilage were used for transplants into cranial defects according to the method used by Primrose of Toronto.

Lesions Observed in Operations for Old Spinal Cord Injuries.—Twenty operations were done by Elsberg for spinal lesions due to old fractures or wounds of the vertebral column. Of these patients, eight were completely relieved of their symptoms, and six were greatly improved. In six there was little or no improvement.

Diagnosis and Therapy of Bone Typhoid.—By means of bacteriologic examinations of bacteria obtained from isolated foci, Bohmansson believes he has succeeded in proving the typhoid nature of typhoid complications in the bone system when no clinical support for such a diagnosis existed. He also believes that multiple typhoid bone foci are probably commoner than is shown by statistics. Systematic roentgenray examination is urged for the entire skeleton in isolated bone foci, in order to determine the treatment, although the diagnosis can be made with certainty only by means of bacteriologic examination of the foci discovered. Single foci are quickly and securely accessible for direct operative treatment. Autogenous therapy was tried by Bohmansson in one case without discomfort to the patient, and with apparently good results. There seems to be good reason for continued experimentation in this direction.

Fatty Hernias.—Twenty-three cases of fatty hernia recorded in the literature are reviewed by Hale, and he adds two personal cases. The diagnosis of these cases seems to be difficult, but treatment is the same as that of an ordinary hernia.

Anuria After Unilateral Nephrectomy.—Frank is of the opinion that not only in calculous anuria, but in the occasional suppression which follows nephrectomy, the suppression is brought about entirely through circulatory disturbances. Hence, the term reflex anuria, as indicative of some nerve connection or nervous reflex, is a misnomer. The active arterial congestion, the vascular overfilling, particularly on the arterial side, Frank says, accounts for the diminution in the urinary output in practically all cases of unilateral nephrectomy during the first few hours. As soon as the circulation on both sides in the kidney is equalized, then there is an increase in the urinary output and the kidney gradually accommodates itself to performing the function of both organs.

Adhesive Plaster Method for Dressing Granulating Wounds.—This procedure is applied by Beck in all types of granulating wounds, whether these be due to ulceration, burns, or trauma, and especially wounds produced by surgical operations. The most important field for this method, he believes, is found in the demand for skin regeneration over denuded surfaces produced in the skin sliding operation for empyema. This method is now widely employed in the treatment of the apparently hopeless cases of chronic suppuration of bones and joints, empyema, and lung abscess. The technic consists in applying strips of plain or zinc oxid adhesive plaster along the edges of the granulating wound. These strips, from one-half to three-quarters inch in width, must be so adjusted that they cover both margins, that of the skin and that of the granulating wound. This leaves the center of the granulating surface exposed for absorption of the wound secretions by a dry, sterile dressing. Twenty-four hours later the dressing and adhesive plaster are carefully removed. It will be found that along the margin of the skin there has now formed a bluish-gray border, about 2 or 3 mm. in width. This bluish-gray border represents the new growth of epithelial cells. The wound is dressed with dry gauze, which is left on for twenty-four hours, followed on the next day by another application of adhesive plaster. This procedure is repeated until the entire granulating surface is covered with epithelial growth. All necrotic tissue must be allowed to slough off, so that the base of the wound is clean. The wound must never be rubbed with gauze, as this would be apt to destroy the new epithelial cells.

Intravenous Injection of Gum Salt Solutions.—A large number of preparations of the gum salt solution made at the central laboratory of the U. S. Army Medical Department and used in resuscitation work at the front were subjected to toxicity tests in guinea-pigs by De Kruif. The aim of the experiments was to discover whether these solutions might possess the "equilibrium disturbing" effect that certain substances in the colloidal state show when injected into the circulation. With one exception no effects of an anaphylactifrom nature were observed. Slight symptoms of various kinds which followed the injection of massive doses of certain samples were of so little importance that they could be disregarded. The exception mentioned was that of a sample contaminated with *Staphylococcus aureus* and an unidentified bacillus. Severe effects followed the injection of this preparation. One guinea-pig succumbed with typical anaphylactic symptoms. This animal was not a normal one, but was shown at necropsy to be pneumonic. Normal harmless gums seeded with the organisms isolated from the preparation just

described showed some increase in toxicity, which was not, however, as marked as that of the original sample. Out of thirty-five samples tested for sterility, three were found to be contaminated. This is a serious indictment of methods of control of sterility used by those making the gum solutions. Attempts to produce a toxic state in gum solutions by subjecting them to cold failed. Attempts to make normal rat and guinea-pig serums "anaphylatoxic" with various samples of gum did not succeed. This furnishes important confirmatory evidence of the harmlessness, as far as the anaphylactic effect is concerned, of the gum solutions.

Treatment of Burns by Sodium Bicarbonate Solution.—McDonald has found by experience that in the first aid care of extensive burns, the dressing with gauze soaked in 10 per cent. or stronger sodium bicarbonate and kept moistened is the simplest and gives greatest comfort. This is preferable to attempts at a more complicated technic. Morphin should be used to give rest but must be administered with care since there is often severe reaction and depression and the drug may do harm. Treatment of shock with posture, heat, hot drinks and stimulants may be necessary. Paraffin is much preferable to gauze with oily dressings and should be substituted as soon as possible, at least within thirty-six hours. With the use of the air pump and atomizer the method can be simplified and rendered quite painless; dressings on gauze should be abandoned. Dichloramin-T in oil is painful and of slight value. If there is extensive slough, wet dressings or antiseptic powders are preferable. The use of adhesive strappings over the raw surface is highly satisfactory and simplifies the treatment, since dressings may be extended to two or three days. The general conditions of the patient must be carefully followed and built up by stimulants, tonics or transfusions. Skin grafting is rarely necessary, nor does it offer much advantage to the healing with paraffin or adhesive.

Suppurating Cyst of Urachus.—For ten years, Ward's patient, a woman, aged 44, had had considerable discomfort from moisture in the umbilicus, which at times was very offensive, smelling like urine. She had to wear a cloth pad over the navel all the time, and every day had to cleanse the parts to prevent irritation. She was unable to walk upright on account of the pain and swelling in her navel. Her sleep was broken by severe contracting pains in the umbilical region. She had become very much depressed mentally, and had no inclination for food. On examining the abdomen, Ward found a tumor mass, round in shape, about the size of an orange, which was just below the navel, and apparently in direct contact with its lower border. The umbilical wall was somewhat elevated and reddened. The floor of the umbilicus was bathed in thin, watery pus, and an odor of urine was present. There were no signs of any abdominal complications. At operation the walls of the cyst had a fibrous, rough, gritty feel. On entering the cyst cavity, about 8 ounces of a yellowish, very fetid pus exuded. At the umbilical end of the cyst, was an oval-shaped mass, about 1½ inches long and three-quarters inch wide, and about one-half inch thick. The removal of this oval mass disclosed a very small aperture, opening directly on the floor of the umbilicus. This opening admitted the point of a fine probe. Ward swabbed out the cavity with tincture of iodin and packed with iodoform gauze. The patient began to improve in health almost immediately; the wound healed rapidly and in two weeks she was discharged.

Boston Medical and Surgical Journal

April 24, 1919, **180**, No. 17

Close Relationship Existing Between General Practitioner and Ophthalmologist and Otolaryngologist. T. H. Odeneal, Beverly, Mass.—p. 459.
*Postinfluenzal Alopecia. S. Ayres, Jr., Boston.—p. 464.
Focal Infection and Relation to Toxemia of Pregnancy With or Without Convulsions. J. E. Talbot, Worcester, Mass.—p. 469.
Treatment of Low Back Strains. H. W. Marshall, Boston.—p. 473.
Pneumonia and Empyema. H. Gray, Camp Devens, Mass.—p. 475.

Postinfluenzal Alopecia.—Twenty-five consecutive cases of alopecia following influenza are analyzed by Ayres. He claims that alopecia is a not infrequent sequel of influenza, occurring commonly about two or three months after the onset of the influenza, but occasionally during convalescence. The alopecia is usually of the diffuse type, although in one of the hospital cases and one private case the lesions were patchy, and, without a history of influenza, might have been diagnosed alopecia areata. Most of the cases which Ayres has seen have been females, twenty-one of the twenty-five consecutive cases. All of the twenty-five patients are under 36 years of age. The ultimate aim in treatment is to promote a healthy circulation of the scalp. This is attained most easily by massage, with the head lowered; by avoidance of obstruction to the main vessels of supply to the scalp by padding the hat band at appropriate points; by stimulating lotions; by keeping the scalp clean.

Journal of Cutaneous Diseases, Chicago

April, 1919, **37**, No. 4

*Keratolysis Exfoliativa. J. E. Lane, New Haven, Conn.—p. 223.
Lichen Acuminatus. S. Feldman, New York.—p. 226.
*Psoriasis and Diet. W. A. Pusey, Chicago.—p. 240.
Lichen Planus in Two Brothers. D. W. Montgomery and G. D. Culver, San Francisco.—p. 242.
Dermatology in U. S. Army: Report of Dermatologic Department, Camp Travis, Texas, for 1918. W. H. Guy, Pittsburgh.—p. 245.

Keratolysis Exfoliativa.—A considerable number of cases of this affection have come to Lane's notice. All of them were seen in the summer and all cleared up with the approach of cool weather. In several cases seasonal recurrence had been noted. The mild cases were favorably influenced by fatty applications. In a marked case the application of a mild dose of roentgen ray brings about a prompt cure.

Psoriasis and Diet.—That a restricted protein diet extending over many years may be accompanied by psoriasis is shown in Pusey's case. When the patient was a child 3 years old, she was thrown into great excitement by seeing a chicken killed, and as a result developed a complete antipathy for animal foods. Until she was 19, she ate absolutely no meat, fowl, fish, milk or eggs, except such milk and eggs as she received in breads. For the last four years she has eaten a very small amount of meats, nothing but pork chops and beef; she eats sparingly of these and only once a day, her reason being she does not care for meats. She has never eaten eggs, milk, fish or shell-fish. She has tasted eggs and milk, but as far as she knows, she has never tasted fish. She is very fond of gravies and her diet in other respects is well rounded. Pusey is convinced that her intake of animal protein is a physiologic minimum, and she is not a heavy eater of leguminous vegetables, yet she had a clear case of psoriasis.

Journal of Medical Research, Boston

March, 1919, **39**, No. 4

*Paratyphoid-Enteritidis Group. VI. Separation of Distinct Paratyphoid Group Among Strains of Rodent Origin. C. Krumwiede, Jr., E. Valentine, and L. A. Kohn, New York.—p. 449.
*Susceptibility of Naturally Nephropathic Animals to Acute Mercuric Chlorid Intoxication. W. deB. MacNider, Chapel Hill, N. C.—p. 461.
*Bacillus of Colon Group Isolated from Cystitis Urine. S. Niwa, Cambridge, Mass.—p. 469.
*Action of Benzol: V. Diphasic Leukopenia as Polynuclear Amphophile Phenomenon (Rabbit). H. G. Weiskotten and H. S. Steenland, Syracuse.—p. 485.
Rocky Mountain Spotted Fever in Domestic Rabbit. N. C. Foot, Cambridge, Mass.—p. 494.

Paratyphoid-Enteritidis Group.—Of fifteen guinea-pig strains of the paratyphoid-enteritidis group, thirteen were alike in their agglutination reactions. This apparent identity was further verified by agglutinin absorptions. Two strains from mice and one each from a rabbit and from a cat as shown by agglutinin absorption were identical with this group of thirteen guinea-pig strains. A distinct paratyphoid group of bacilli is encountered therefore in spontaneous infections from laboratory animals, especially rodents. Some of the strains from mice and guinea-pigs do not fall into the above group. Others belong agglutinatively to the *B. enteritidis* group. Evidently the host origin of a culture is not neces-

sarily an index to its biologic position, and the classification of strains according to origin, as *B. typhi-murium* or *B. pestis-caviae*, is not justified. None of the rodent strains studied belongs to either the *B. cholera-suis* or *B. paratyphosus* "B" groups.

Acute Mercuric Chlorid Intoxication.—Fourteen naturally nephropathic animals were intoxicated by mercuric chlorid. From the results obtained by MacNider, it is evident that the kidney of the naturally nephropathic animal is very susceptible to the toxic action of mercuric chlorid, and that the toxic effect of mercuric chlorid, so far as the kidney is concerned, has been associated with the development of an acid intoxication. The severity of the acute changes occurring in the kidney have shown a correlation with the severity and duration of the acid intoxication.

Bacillus of Colon Group Isolated from Cystitis Urine.—The organism isolated by Niwa from cystitis urine is a member of the colon group which is not named, but according to McConkey is to be classified in Group II, according to Jenson-Bahr's list in Subgroup G of *B. coli*, and to be located as No. 227 of Group XV on the list published by Bergey and Deehan, 1908. In the fermentation tests with different sugars, this organism fermented dextrose, lactose, dulcite, mannite, maltose, raffinose, adonite and inulin with the production of acid and gas without any delay, whereas it did not ferment saccharose at all. Of those sugars the gas production through this organism was the strongest in mannite and maltose, and then in dulcite, lactose, dextrose and adonite, while in raffinose and inulin it was the weakest. The acidity produced by this organism in those sugar mediums was most marked in mannite, maltose, dulcite, and lactose, and then in dextrose and adonite, while in raffinose and inulin it was only feeble. This organism proved to be pathogenic and pyogenic to animals, such as the mouse and guinea-pig. The serum of the patient in question showed a strong agglutinating power to this organism. Hence Niwa suggests that this organism may be the active cause of his case of cystitis.

Action of Benzol.—The diphasic character of the leukopenia following subcutaneous injections of olive oil benzol mixture in rabbits Weiskotten and Steensland mention is mainly a polynuclear amphophile pnenomenon and only to the extent of about one sixth a small mononuclear phenomenon.

Journal of Parasitology, Urbana, Ill.

March, 1919, **5**, No. 3

Life History of Ascaris Lumbricoides. B. H. Ransom and W. D. Foster, Washington, D. C.—p. 93.
Cuterebra Tenebrosa Coquillet. R. R. Parker and R. W. Wells, Bozeman, Mont.—p. 100.
Development of Ascaris Lumbricoides *L.* S. Yoshida, Osaka, Japan.—p. 105.
Species of Hedruris Occurring Commonly in Western Newt, Notophthalmus Torosus. A. C. Chandler, Portland, Ore.—p. 116.
Microphallus Ovatus Sp. Nov. From Crayfish and Black Bass of Lake Chautauqua, N. Y. H. L. Osborn, St. Paul.—p. 123.
New Cystocercous Cercaria. H. S. Pratt, Syracuse.—p. 128.
Trichomonas Intestinalis in Vitro. M. F. Boyd, Galveston, Tex.as.—p. 132.
*Case of Balantidium Coli Dysentery. C. W. Mason, Chieng Rung, Yunnan, China.—p. 137.

Balantidium Coli Dysentery.—Human balantidiosis is said by Mason to be less rare than is usually supposed. However, on account of the infrequent appearance of the parasites in the stools of infected persons and the absence of clinical symptoms in many of the cases, it is probable that parasitization with *Balantidium coli* is frequently overlooked in the routine examination of stools. Thirteen cases have been observed in the Philippine General Hospital. In the Bilibid Prison, thirty-five cases have been found in the last two and a half years, an average of more than one a month. *Balantidium coli* produces bacteriologically sterile abscesses in the submucosa of an infected intestine. The latency prevalent in balantidiasis of man is due chiefly to the fact that the patient, although parasitized, is not infected with *Balantidium coli*, but is in part due to the chronicity of the ulcerative process in infected cases.

Journal of Urology, Baltimore

February, 1919, **3**, No. 1

*Experimental Nephropathy Produced by Organo-Mercury Compound of Phenolsulphonephthalein. J. E. Burns, E. C. White and J. G. Cheetham, Baltimore.—p. 1.
*"Forage de la Prostate" in Treatment of Prostatic Hypertrophy. G. Luys, Versailles.—p. 17.

Experimental Nephropathy.—This study was undertaken with the idea of producing acute and chronic renal lesions of varying degrees of intensity and of determining whether or not lesions could be produced more nearly resembling those found in human beings in the different types of nephritis than have been heretofore experimentally accomplished. The drug synthesized by Burns and his associates, and made use of in their experiments, is tetra-oxymercury phenolsulphonephthalein. It is prepared by the action of an excess of mercuric acetate on phenolsulphonephthalein and it contains 63 per cent. of organically bound mercury. The renal lesions produced by this drug resemble quite closely those found in the different types of nephritis in human beings. The lesions in the acute type are mainly tubular, although some slight glomerular changes have been noted. In the chronic type the most striking change was the increase of interstitial tissue both in the glomeruli and between the tubules, together with areas of tubular obliteration and of glomerular fibrosis. Chemical examination of the blood and urine showed results quite analogous to the type of lesions produced. This organo-mercury compound has, as was anticipated, produced these marked renal lesions without producing lesions elsewhere in the body in the chronic type, and in the acute type the lesions other than renal have been insignificant and in no case responsible for the death of the animal.

"Forage de la Prostate" in Treatment of Prostatic Hypertrophy.—This treatment has as its object the gouging out of a tunnel from the interior of the gland through the natural channels, in such a way as to permit free escape of urine. "Forage de la Prostate" a surgical intervention carried out under direct ocular observation was originated by Luys in 1914. A direct vision cystoscope and the galvanocautery are used. Luys says that the method has given absolutely satisfactory results. These good results are durable as well as immediate.

Maryland Medical and Chirurgical Faculty Bulletin, Baltimore

April, 1919, **11**, No. 7

Medical Library. J. Ruhräh, Baltimore.—p. 148.

Medical Record, New York City

April 26, 1919, **95**, No. 17

*Pneumonia and Empyema at Camp Merritt in Winter of 1917-1918. E. H. Schorer, F. D. Clark, R. Sanderson, J. D. Dickson, and F. M. Huntoon, Hoboken.—p. 673.
Influenza Aboard Man-of-War. F. M. Harrison, U. S. N.—p. 680.
Analysis of Two Hundred and Sixteen Industrial Accidents. C. Scheffer, Boston.—p. 685.
Scopolamin-Morphin in War Surgery. C. W. Strobell, New York.—p. 687.

Pneumonia and Empyema at Camp Merritt.—Pneumonia of three types, lobar, bronchopneumonia, and combinations of the two, were observed by the authors at Camp Merritt. Many of the cases were what MacCallum, Cole, and their co-workers have called interstitial bronchopneumonia, but of these very few followed measles or other contagious diseases. Empyema was the most frequent and serious complication. Of 181 pneumonia patients whose sputum was examined, eighty-one had fluid in the chest; and of these, fifty-six had a purulent pleural exudate. Hemolytic streptococci were found in 51.9 per cent. of the pneumococcus sputums, 53.7 per cent. of the pleural exudates, and 70.4 per cent. of the purulent pleural fluids. Thirty-four per cent. of straight pneumococcus pneumonias were complicated by chest fluid and 25 per cent. by empyema; 26.3 per cent. of pneumococcus and hemolytic streptococcus pneumonias were complicated by chest fluid and 24.9 per cent. by empyema; 15 per cent. of pneumococcus and nonhemolytic streptococcus pneumonias were

associated with pleural fluid and 7.5 per cent. with empyema; 26 per cent. of all pneumonias in which pneumococci played a part had chest fluid and 20 per cent. had empyema. Hemolytic streptococcus pneumonia was complicated in 37.3 per cent. of the cases by chest fluid and in 25.4 per cent. by empyema. In spite of the fact that in the 116 cases of pneumonia in which type pneumococci were found, twenty-two of the twenty-six empyemas were caused by hemolytic streptococci. Three empyemas caused by pneumococci were found in patients in whose sputum no pneumococci were found. The authors believe that the hemolytic streptococci are seldom the primary cause of pneumonia, but that usually they assume an important and principal part in the final result of the cases of pneumonia.

Some of the hemolytic streptococci, or at least a portion of the organisms, are bile soluble, this factor being precipitinogenic. According to ability to ferment different sugars, the hemolytic streptococci causing empyema may be divided in four groups. If these groups be accepted, there is further argument for the belief that the streptococci are not the primary cause of the pneumonia, but are secondary invaders. These streptococci have a large common group factor in producing precipitin, but also contains specific precipitinogenic groups. The authors maintain that in the treatment of hemolytic streptococcus empyema drainage is necessary, the time for this being determined by the condition of the patient. Active immunization by the injection of autogenous vaccine seems to be of value in some cases. In many hospitals routine leukocyte counting on the first and tenth days of pneumonia, and on the first, second, third and tenth days after operation for empyema, has proved to be of value. This does not preclude leukocyte counting at any other time if indicated.

Modern Hospital, Chicago

April, 1919, **12**, No. 4

Navy Base Hospital Overseas. L. W. Johnson and R. V. Miller, U. S. N.—p. 231.
Application of Hotel Service to the Hospital. H. V. Pettit, Ottawa, Ill.—p. 238.
Department of Anesthesia at Royal Victoria Hospital, Montreal. W. H. Howell, Montreal.—p. 240.
Care of Infectious Diseases in Hospitals. D. L. Richardson, Providence, R. I.—p. 244.
Municipal Contagious Disease Hospital of City of Chicago. M. J. Robinson, Chicago.—p. 246.
Converting Department Store into Hospital.—p. 248.
Living-Out Versus Living-In for Hospital Employees. L. R. Curtis, Chicago.—p. 253.
Hospital Accounting. C. A. Porter and H. K. Carter, Chicago.—p. 255. To be continued.
First Training School for Native Nurses in Haiti. L. D. Jordan, U .S. N.—p. 273.
Dispensaries and Their Service to the Public. M. M. Davis, Boston. —p. 274.
War-Time Planning of Hospitals. O. H. Bartine, New York.—p. 276.
Social Service and Dispensary Admission Service. J. Thornton, Boston. —p. 278.
High-Pressure Dressing Sterilizers or Autoclaves. S. G. Scanlan, G. L. Larson and P. F. Clarke, Madison, Wis.—p. 281.
Some Lessons War Has Taught. W. O. Ludlow, New York.—p. 283.

Nebraska State Medical Journal, Norfolk

April, 1919, **4**, No. 4

Community and Autogenous Vaccines in Treatment of Chronic Gonorrhea. M. F. Arnholt, Lincoln.—p. 98.
Surgical vs. Medical Treatment of Gastric Ulcer. H. H. Everett, Lincoln.—p. 100.
Report of Medical Work of Local Board for Division No. 1, City of Lincoln, Neb. H. P. Wekesser, Lincoln.—p. 104.
Cleft Palate and Hairlip. W. L. Shearer, Omaha.—p. 106.

New York Medical Journal, New York City

April 26, 1919, **109**, No. 17

Treatment of Two Commonest Sequels of Labor and Two Most Frequent Diseases of Women. B. C. Hirst, Philadelphia.—p. 705.
Physiotherapy in Treatment of Osteomas. P. Kouindjy, Paris.—p. 709.
Bacillus of Spanish Influenza. A. J. Kinkelmann and C. P. Hinkelmann, Oklahoma City.—p. 712.
Artificial Pneumothorax in Pulmonary Tuberculosis. L. S. Peters, Albuquerque.—p. 714. Conclusion.
Influenza in Horses and in Man.. G. A. Soper, New York.—p. 720.
Influenza. A. B. Leeds, Chickasha, Okla.—p. 725.
Prevention and Treatment of Seasickness and Allied Conditions. N. Rosewater, Cleveland.—p. 727.
The Fleet Surgeon: Duties, Responsibilities and Status in U. S. Navy. C. A. Mayo, New York.—p. 729.

Northwest Medicine, Seattle

February, 1919, **18**, No. 2

Intraspinal Therapy in Urology and Syphilis. H. W. Howard, Portland, Ore.—p. 19.
Surgery of Prostate. G. W. Middleton, Salt Lake City.—p. 24.
Ethical Economics. G. S. Peterkin, Seattle.—p. 26.

March, 1919, **18**, No. 3

Technic of Quantitative Estimation of Urea, Ammonia and Total Nitrogen in Urine. H. D. Haskins, Portland, Ore.—p. 37.
Relation of Hospital to General Public. E. F. Tucker, Portland, Ore. —p. 42.
Some Impressions of Army Medical Service. K. Winslow, Seattle. —p. 45.
*Bacteriology of Recent Epidemic of Influenza at U. S. Naval Training Camp, Seattle, Wash. J. E. Henry.—p. 46.
Static Labyrinth. W. E. Dixon, Oklahoma City.—p. 47.

Bacteriology of Recent Epidemic of Influenza at Seattle.—Thirty-seven cases were studied by Henry. Positive findings were obtained in eight. In six these findings were pneumococcus (four, Type IV; two, Type I); in one both streptococcus and *B. influenzae* and in one, the meningococcus. Blood cultures were made in thirty-one cases. In six apparently uncomplicated cases, pneumococcus Type IV was found once. In twenty-five cases complicated by bronchopneumonia, Type IV was also found twice in the blood stream. Four spinal fluids were examined from cases diagnosed as complicated by meningitis. Pneumococcus, Type I; pneumococcus, Type IV; and meningococcus, respectively, were found in three. The fourth was sterile and the patient subsequently recovered. Of two pleural exudates, one showed both a streptococcus and *B. influenzae*, and one pneumococcus, Type I. The latter was the only case studied at necropsy and was a bronchopneumonia. The heart's blood in this case also showed the same organism.

Texas State Journal of Medicine, Fort Worth

April, 1919, **14**, No. 12

Coat of Arms of Medical Corps. C. C. McCulloch, Jr., Washington, D. C.—p. 382.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Archives of Radiology and Electrotherapy, London

March, 1919, **23**, No. 10

*Examination of Vermiform Appendix by Roentgen Ray. E. I. Spriggs. —p. 301.
Roentgen-Ray Demonstration of Injected Vascular System of Fetus. H. C. Orrin.—p. 322.

Examination of Appendix by Roentgen Rays.—While Spriggs does not advocate making a roentgenogram in any case of acute appendicitis, he does believe that the procedure is of great value in cases of chronic appendicitis, not only in cases in which suspicion had been cast on that organ, but especially in the subjects of vague abdominal symptoms of unknown cause. In many such cases Spriggs has been able either to demonstrate a normal appendix or to show that it was, or had been, the seat of disease. He gives a barium sulphate and buttermilk meal. Of the last 100 patients examined, the appendix appeared to be normal in forty, though one of these patients showed tenderness. In nineteen cases the appendix was reported diseased; the diagnosis was confirmed by operation in eleven cases. In twenty-seven, slighter abnormalities were found, such as appendical stasis (eighteen cases), kinking, fixation, partial obliteration or diminution of lumen. In the remaining fourteen, the appendix was not seen. In one of these cases operation was done and a constriction found at the base of the appendix. An account is given of the methods and manipulations which have been found useful in the examination of 300 appendixes. Details are given of thirty-six cases in which the roentgen-ray reports

are compared with the operative findings. In all of these the diagnosis was verified at the operation. Twenty-three photographs of diseased appendixes are shown, and eight colored drawings of appendixes after removal.

British Journal of Children's Diseases, London

January-March, 1919, **16**, Nos. 181-183

*Case of Aplastic Anemia. J. P. Parkinson.—p. 1.
Polyneuritis Following Treatment by Arsenobenzol. G. Variot, and M. Bouquier.—p. 4.
Recurrent Functional Micropsia. J. Thomson.—p. 7.
*Autoserum Treatment of Chorea. A. Brown, G. E. Smith, and J. G. Phillips.—p. 8.
*Treatment of Pulmonary Tuberculosis in Children by Artificial Pneumothorax. E. Stolkind.—p. 18.

Aplastic Anemia.—Parkinson's patient, a boy aged 9 years, was first seen because of bruising all over the arms, shins, and back, and a rash resembling flea bites. For a month he had been bleeding at the mouth, the lips were painful and swollen, and the gums sore. For a fortnight he had had severe headache, and was noticed to be rather pale and breathless. The red cells numbered only 1,260,000; hemoglobin 20 per cent. The cause of the profound anemia was obscure. There was no reason to suspect scurvy, hemophilia, tuberculosis or syphilis. The Wassermann reaction in the blood was definitely negative. Lead poisoning was unlikely. There was no evidence of intestinal parasites. The blood showed marked leukopenia, due almost entirely to dimunition in the number of the polymorphonuclears, the lymphocytes being in relative excess, but actually about normal in number. Ophthalmoscopic examination showed slight optic neuritis and numerus hemorrhages in both retinas. The anemia subsequently increased and the hemorrhages in the gums continued. The red cells went down to 624,000; the hemoglobin was 17 per cent. Then 300 c.c. of blood mixed with 30 c.c. of citrate solution were injected intravenously. The patient's color improved greatly during and after that procedure. A second transfusion was carried out ten days later. The child grew weaker and weaker and more drowsy, and had incontinence of urine and feces. Another transfusion was refused. The boy lay unconscious for a fortnight, and then slowly improved. At the present time he seems to have recovered completely.

Autoserum Treatment of Chorea.—Twenty-three cases are reported by Brown and others in which this treatment was employed. The first step consists in withdrawing about 50 c.c. of blood from the median basilic vein. The blood is received into three sterile test tubes. The test tubes are then put in the centrifuge for thirty to forty minutes. At the end of that time the serum is drawn up in a sterile pipet, emptied into a sterile test tube, and put in the incubator to keep at the proper temperature for injection. From 50 c.c. of blood from 20 to 25 c.c. of serum are obtained. This serum is injected intraspinally, care being taken not to cause pressure symptoms. The patients are kept in the hospital for one to two hours to watch for pressure or heart symptoms. Usually improvement follows in two or three days and has become stationary again by the end of the week, when they return to the hospital and another treatment is given. Following the injection there may be a mild disturbance, such as slight rise of temperature, a slight stiffness of the neck, or increase in pulse rate. These rapidly pass off. Nothing solid is given to eat for six to eight hours following the treatment. Of the twenty-three cases observed, 77 per cent. were cured, 19 per cent. improved, and one case unimproved, this patient having refused further treatment on account of a severe reaction. There has so far been no recurrence. Of the twenty-three cases, seventeen were of a mild degree and five were severe. In four instances the duration of the disease was over a year, while the remainder showed symptoms on an average of six and a half weeks' standing. The average number of injections given was three, but several were given one injection, while in one instance five were administered before a cure was effected. The average amount of serum employed was 17 c.c. Nineteen patients were cured in three weeks and four were cured within one week. All the severe cases required more than one injection.

Treatment of Pulmonary Tuberculosis in Children by Artificial Pneumothorax.—Stolkind is of the opinion that pneumothorax treatment should be applied, not only in adults, but also in children, in every case of advanced pulmonary tuberculosis; but not as a last resort, when it is too late.

British Medical Journal, London

April 5, 1919, **2**, No. 3040

*Treatment of Bladder in Gunshot Injuries of Spinal Cord. F. Kidd.—p. 397.
*Chest Wounds. J. A. Nixon.—p. 399.
Resuscitation Work in Casualty Clearing Station. R. Charles and A. F. Sladden.—p. 402.
Colloidal Manganese in Gonorrheal Ophthalmia. D. McF. Livingstone.—p. 404.
*Methylene Blue in Purulent Discharge from Eye Socket. J. H. McIlroy.—p. 405.
*Response to Calcium shown in Maniacal States. T. C. Graves.—p. 406.
Cerebrospinal Fever. H. Rolleston.—p. 405.
Half a Century of Smallpox and Vaccination. J. C. McVail.—p. 408.
Infant Feeding. S. B. Jackson.—p. 412
Proflavine Oleate in Treatment of Open Wounds. R. A. Stoney.—p. 412.

April 12, 1919, **2**, No. 3041

New Birth of Medicine. C. Albutt.—p. 433.
War Neuroses. F. W. Mott.—p. 439.
Gunshot Wounds of Chest. T. R. Elliott.—p. 442.
Surgical Aspects of Gunshot Wounds of Chest. G. E. Gask.—p. 445.
Dysentery in England: I. Bacillary. L. S. Dudgeon.—p. 448. II. Amebic. W. Yorke.—p. 450.

Treatment of Bladder in Gunshot Injuries of Spinal Cord.—Intermittent catheterization and suprapubic cystotomy in the treatment of the paralyzed bladder after gunshot injuries of the spinal cord, Kidd says, should be discarded. In the hands of a careful worker mechanical expression of the bladder is likely to be the best method if it does not in the end diminish the chances of automatic action. This method is likely to ensure a more or less clean bladder, but it is questionable whether it will ensure an automatic bladder. Until this question is settled the method of the "tied-in" catheter is, on the whole, the best and most "fool-proof" method, and is likely to lead to the highest percentage of recoveries. After irrigating the urethra with a 33 per cent. aqueous solution of oxycyanid of mercury, the rubber catheter is passed into the bladder and is fixed with a safety pin. A piece of tape is tied to each end of the pin, is carried along the sides of the penis, and fixed there with adhesive straps. This strapping should be just tight enough to control the tapes, and yet not so tight as to cause edema of the prepuce. The tied-in catheter is left draining into a bottle all the time so that the bladder never becomes distended, a most important point. The bladder can be irrigated with oxycyanid of mercury solution (1 dram in 1 pint) twice a day. The catheter is removed every fourth day, the urethra irrigated and a fresh catheter inserted. By tying the catheter in place several objects are gained: 1. Time is not wasted by passing a catheter frequently. 2. The urethra is not damaged by the constant passing of a catheter. 3. The bladder muscle is not overstretched, so that automatic bladder can be established in a few weeks' time. 4. It is easy to carry out lavage, the urine remains clean, and pyelitis and stone are prevented.

Prompt Treatment of Chest Wounds.—Nixon emphasizes that all wounds of the parietes and thoracic contents should receive the surgical attention they require at the earliest possible moment. Hemorrhage must be arrested and every possible step taken to avert infection early. No fluid, whether blood, serum, or pus, must be allowed to collect in the chest. Early and frequent aspiration must be resorted to whether thoracotomy has been performed or not. Any fluid in the chest is dangerous from two points of view: (*a*) It is a nidus for sepsis. (*b*) It interferes with the expansion, not only of the injured, but also of the uninjured lung, setting up conditions favorable to the development and spread of bronchitis, bronchopneumonia, and lobar pneumonia. Foreign bodies, metal, clothing, and bone should be removed whenever possible. They are dangerous, not only from the point of view of immediate sepsis, but from that of subsequent interstitial fibrosis. Resection and open drainage as formerly practiced for empyema is an unsatisfactory operation, and is shown by experience in this war to be rarely necessary if the early treatment, according to modern methods, is not neglected.

Use of Methylene Blue in Infection of Orbit.—The prevailing micro-organism obtained by McIlroy by agar culture from nine cases of purulent discharge from the eye socket was found to be the *Staphylococcus aureus*. Methylene blue, although proved to be very active clinically in cases such as this one, was found to have comparatively little bactericidal action on the staphylococcus obtained from the discharge; 0.03 c.c. of a very dilute emulsion of the micro-organism, after even twenty-four hours' exposure to the drug, still yielded a number of colonies of growth after incubation.

Use of Calcium in Maniacal States.—Acting on deductions drawn from physiologic observations, Graves tested the effect of the exhibition of calcium lactate in persons suffering from various degrees of excitement. The action of the drug became evident at least during the twenty-four hours following its exhibition. The acute mental symptoms were alleviated without the production of the stupor so commonly observed following the use of "sedative" drugs. The circulatory response was equally interesting. Instead of the rapid, at times almost unaccountable pulse, with its flaccid artery and variable but always low systolic pressure, the pulse became slower, the artery normally constricted and the pulse wave stronger, indicative of an improved action of the ventricular myocardium. The action of the drug was equally satisfactory in the distressing restlessness and excitement of agitated melancholia and confusional states as with the simple mania. Those cases in which influenza had become assigned as the principal cause have reacted well to the drug. These cases had resisted ordinary sedative treatment, but with this definite addition of calcium to the diet, a vicious circle seems to have been broken completely, and the patients made good progress toward recovery. Many of the other cases in which, owing to the duration of the character of the mental disorder, complete recovery can hardly be expected, have nevertheless shown amelioration of the more acute symptoms. Graves gives 10 grains, three times a day, with food, and when a response has been obtained drops the dosage to 5 grains. In one particularly distressing case of agitated melancholia, in addition to the doses by day, one or two doses were given at night. In one case of mania with diarrhea, not only was the restlessness and excitement allayed, but the number of stools fell from six to one. So far no untoward effects of any kind have been observed.

Edinburgh Medical Journal

April, 1919, **22**, No. 4

Disease in Macedonia. R. A. Fleming.—p. 215.
Case of Primary Chorionepithelioma of Ovary. J. A. Kynoch.—p. 226.
Congenital Edema. D. M. Greig.—p. 230.
Diets in Use in Edinburgh Royal Infirmary in 1843.—p. 234.
Doctors in Some Modern French Novels. J. B. Adams.—p. 237.
*Treatment of Sinuses Persisting After War Wounds. A. J. Turner.—p. 253.

Treatment of Sinuses Persisting After War Wounds.—The addition of a small amount of scarlet red powder Turner found was advantageous in the treatment of persistent sinuses. His paste consists of iodoform, ½ ounce; salicylic acid, ½ ounce; scarlet red powder, 25 grains; liquid petrolatum, about ½ ounce. If found a little too dry on rubbing into the tissues with dry gauze, a little additional petrolatum may be poured on the gauze so used. Turner has used this paste with good results in 110 cases. He found that it resulted in a saving of more than 44 per cent. of gauze, 18 per cent. of boric lint, 41 per cent. of plain lint, and 31 per cent. of cotton wool. There was also a saving of 49 per cent. of bandages, but this was partly due to sterilization and repeated use of all bandages, however soiled; so that none were wasted, except such as outpatients failed to bring back. One of the advantages of this antiseptic paste is the freedom from smell. Other advantages are the rapid fall of temperature in cases in which there has been fever, and the absolute comfort of the patient after one somewhat painful dressing.

Indian Medical Gazette, Calcutta

March, 1919, **54**, No. 8

Ayurveda [Hindu Medicine] of Today. W. D. Sutherland.—p. 81.
*Bacteriology of Blood and Treatment of Influenza Occurring Epidemically at Calcutta. U. N. Brahmachari and S. N. Ghosh.—p. 90.
Railway Traveling in Hot Weather. F. N. Rose.—p. 92.
Acidosis in Relation to Diabetes. B. N. Anklesaria.—p. 96.
Tetanus. A. Noronha.—p. 98.
Case of Intraperitoneal Abscess. G. K. Tambe.—p. 100.

Bacteriology of Blood and Treatment of Influenza in Calcutta.—Blood was taken by Brahmachari and Ghosh for culture in ninety cases of influenza. In ten cases the blood was taken from the heart under perfectly aseptic conditions within from half an hour to an hour after death. The cases were clinically divided under two heads: (1) mild cases in which no pneumonic symptoms were present, and (2) cases in which pneumonic symptoms were present and which were regarded as severe cases. The results of blood culture of these two types of cases was very characteristic. Thus, out of fourteen mild cases from which blood was taken for culture, only one showed the presence of streptococci in the blood, and this patient subsequently developed pneumonic symptoms and died. On the other hand, out of seventy-six severe cases, thirty-six showed the presence of streptococci or pneumococci in the blood. The blood cultures in positive cases generally showed the presence of streptococci or pneumococci. In two instances a pure culture of *Staphylococcus aureus* was obtained. Gram-negative, capsulated cocci, which formed no growth on agar or subculture, were obtained in two cases. In four cases bacilli somewhat resembling typhoid bacilli, but gram-positive, were obtained. A twenty-four hour culture of one of the strains of streptococci with hemolytic properties, obtained from the blood of one of the patients, was injected subcutaneously into one of the two guinea-pigs kept inside the same cage. The inoculated guinea-pig died after sixty hours. Smears were made of the spleen, the heart blood and the lungs. In every one of these the same kind of streptococcus was obtained as that with which the guinea-pig was inoculated. The second guinea-pig seems to have also been infected by contact (?) with the inoculated one. The second died three days after the death of the inoculated one, and the same strain of streptococcus was obtained in its organs as from those of the inoculated one.

Journal of Laryngology, Rhinology, and Otology, London

April, 1919, **34**, No. 4

Aural Bacteremia (as Apart from Pyemia). R. Lake.—p. 110.
Carcinoma of Larynx: Laryngo-Fissure; Patient Free from Recurrence After One Year. E. H. White.—p. 113.
Hemorrhage Following Removal of Tonsils, and Treatment. I. Moore.—p. 114.
Hemorrhage Following Opening of Peritonsillar Abscess. A. J. Hutchinson.—p. 122.

Journal of State Medicine, London

April, 1919, **27**, No. 4

Obviation of Ship-Borne Infections. W. M. Willoughby.—p. 97.
Conference on Prevention and Arrest of Venereal Disease in Army, at Royal Institute of Public Health.—p. 112. To be continued.
Industrial Hygiene in Relation to War Strain and Technical Development. I. W. Hall.—p. 118.

Journal of Tropical Medicine and Hygiene, London

April 1, 1919, **22**, No. 7

*Clinical and Pathologic Notes on Fatal Case of Bilharzia Treated by Tartar Emetic. R. G. Archibald and A. Innes.—p. 54.
Rigor of Malarial Fever. M. D. O'Connell.—p. 55.

Fatal Case of Bilharzia Treated by Tartar Emetic.—The tartar emetic is blamed for the death of the patient whose case is reported by Archibald and Innes. The initial dose was ½ grain, followed after a day's interval with 1 grain, and after a similar interval by 1½ grains then by 2 grains, given every second day. After the injection of the first 2 grains there was a little vomiting and a slight degree of phlebitis at the site of the inoculation, which passed off in a day without ill effects. From this time on, each injection was followed by considerable cough with frothy expectoration, which, however, regularly subsided after fifteen minutes. After the seventh and eighth injections there was a slight rise of temperature. Subsequent injections were usually followed by elevation of temperature, never higher than 99.4 F. After a total quantity of 33 grains had been given the

urine was examined and proved to contain blood but no bilharzial ova.

An epidemic of influenza occurred about this period, and three days after it first appeared in the ward occupied by the patient, he acquired the disease. He had a severe cough with respiratory embarrassment, a temperature of 105 F., and a pulse of 120. Although his temperature remained persistently high for the next two days, he did not appear to be losing ground. Suddenly, on the fourth day of the illness, he developed signs of collapse with sighing respiration and air hunger. The pulse became feeble and rapid, and, in spite of the usual heart stimulants, he died within an hour of the onset of the collapse. The findings obtained at necropsy convinced the authors that the pathologic changes in the organs were due to the action of tartar emetic, and were not sequels of bilharzia, influenza or a previous malarial infection.

Lancet, London

April 12, 1919, **2**, No. 4989

Cerebrospinal Fever: Lumleian Lectures. H. Rolleston.—p. 593.
Sanitary and Insanitary Makeshifts in Eastern War Areas. A. Balfour.—p. 604.
*Treatment of General Paralysis of Insane by Introduction of Arsphenaminized Serum into Lateral Ventricle. H. Campbell and C. Ballance.—p. 608.
*Malaria and Trench Fever. G. Ward.—p. 609.

Treatment of General Paralysis of Insane.—Attention is directed by Campbell and Ballance to their first report (1914) on the treatment of general paralysis of the insane by the introduction of arsphenaminized serum into the lateral ventricle. They now suggest the same treatment for the arrest of optic atrophy. The optic nerve has a sheath derived from the dura mater, another derived from the arachnoid and another from the pia. The space underneath each of these sheaths can be injected separately. The injection beneath the arachnoid sheath passes into the substance of the optic nerve, and if made into the subpial space passes into the optic nerve and extends as far as the papilla, and this, it is suggested, should be the path which the curative serum should take so as to save the essential elements of the papilla and retina from destruction. Whether the injection should be made into the lateral ventricle or through the outer angle of the sphenoidal fissure into the subarachnoid space at the base of the brain remains to be determined.

Malaria and Trench Fever.—Ward believes that the close resemblance between malaria and trench fever does not seem to be generally appreciated. Rigor is usual in malaria, provided the patient is not taking quinin. It occurs, but is unusual, in trench fever. Quinin controls the temperature in malaria in most cases, i. e., it prevents more than one or two further rises to 103 or 104 F. This, of course, applies to temperate climate malaria. Quinin has no effect in trench fever. A rash is absent in malaria, but may be seen in trench fever. Leg pains are more frequent in trench fever, but may be of equal intensity in malaria. Some cases of malaria show a general pigmentation (often well seen in the lips), which increases with attacks and diminishes between them. This is not seen in trench fever. Finally, trench fever and malaria may be contracted *de novo* in England and the fact that a patient has suffered from one of them will not necessarily enable him to distinguish between a relapse of that one and the onset of the other.

Sei-I-Kwai Medical Journal, Tokyo

March 20, 1919, **37**, No. 2-3

Three Cases of Nephroma Embryonale. J. Saito.—p. 7.
*Oriental Constricted Liver (Schnur-Leber). F. Oshima.—p. 10.

Oriental Constricted Liver.—Oshima investigated sixteen cases of the so-called Oriental constricted liver (Schnurleber), and found that the course of the sulcus coincides with that of the vessel in the diaphragm. He is of the opinion that the fixation of the liver by the ligamentum suspensorium hepatis and the pressure of the Japanese woman's belt make the longitudinal sulcus of the liver immovable, and, moreover, the liver is pressed by the diaphragm from above and, because of the manner in which the Japanese sit, from below. As the liver tissue begins to show the effects of advanced age, there is a natural tendency to folding in the superior surface of the liver, corresponding to the sulcus sagittalis in the inferior surface. In addition to the above facts, if the congestion and pulsation of the vessels of the diaphragm exists, the surface of the liver should be pressed and molded by the vessel, such influences being the important factor in the occurrence of the sulcus (Oriental constricted liver). Therefore, the vessel of the diaphragm plays an important rôle in the development of this sulcus.

Journal de Radiologie, Paris

March, 1919, **3**, No. 4

*Roentgen Technic for Certain Points in the Skeleton. Laquerrière and Pierquin.—p. 145.
Radiographic Aspects of Osteophytic Spondylosis. A. Leri and V. Mahar.—p. 149.
Apparatus for Radium Therapy. A. Laborde.—p. 153. Cont'n.
The Maximum of Mobilization in Locating Projectiles. H. Costantini and L. Gosselin.—p. 164.
The Conference of War Radiologists. Mignon and others.—p. 165.

Special Technic for Roentgen Study of Certain Bones.—The tip of the shoulder, the knee, the space between the condyles, the head of the fibula and the heel may require a special technic for each to be most instructive, as is described in detail. The subject kneels on the floor for the radiogram to be taken of the popliteal space.

Paris Médical

March 15, 1919, **9**, No. 11

Fatty Degeneration of the Liver from Physiologic and Pathologic Standpoints. Gilbert and Surmont.—p. 213.
*Treatment of Malaria. G. Paisseau and J. Hutinel.—p. 216.
*Septicemia in Influenza. Cayrel.—p. 221.

Treatment of Malaria.—Paisseau and Hutinel present arguments from their own experience to prove that the combination of arsphenamin with quinin is much more effectual than the latter alone in treating malaria. They gave an intramuscular injection of 1.20 gm. of quinin at the beginning or during the malarial attack, followed within twenty-four hours—preferably from six to twelve—with an intravenous injection of 0.15 gm. arsphenamin. This is repeated every week, with mild tertian, increasing the dose of the arsphenamin to 0.30 gm. With malignant tertian, they give two injections of the quinin daily until the temperature is normal. Then 0.15 gm. arsphenamin is injected, and after this 2 gm. of quinin by the mouth until the temperature has been normal for two days. The two drugs are then kept up once a week for two months and, during a third month, once a fortnight. Iron and epinephrin are useful adjuvants.

Septicemia in Influenza.—Cayrel cites from various writers their conflicting views on this subject. The variability of the microbian flora and the date when the cultures are made from the blood seem to offer the only explanation of the divergent findings.

March 22, 1919, **9**, No. 12

*Reconstruction of the Face. L. Dufourmentel.—p. 229.
Aseptic Meningeal Reactions with Brain Wounds. R. J. Weissenbach, W. Mestrezat and H. Bouttier.—p. 232.
*The Wassermann Reaction in Chronic Splenomegaly. P. E. Weil.—p. 237.
Partial Resection of Sacrum in Treatment of Total Prolapse of Rectum. A. Bréchot.—p. 239.

Reconstruction of the Face.—A number of technical points are emphasized and some cases are illustrated.

The Wassermann Reaction with Splenomegaly.—Weil obtained a positive Wassermann reaction in seven of nine cases of primary chronic splenomegaly. There was nothing to indicate inherited or acquired syphilis, and treatment as for syphilis did not modify the reaction or the splenomegaly, but only seemed to aggravate the general condition.

Presse Médicale, Paris

March 13, 1919, **27**, No. 15

*Aseptic Operations on Digestive Tract. Gudin (Rio de Janeiro).—p. 133.
War Neurasthenia. M. Page and E. Gauckler.—p. 134.
*Radium Emanations for Treatment of Cancer. F. Jeunet.—p. 136.

Aseptic Operations on Stomach and Intestine.—Gudin gives sixteen illustrations of a crusher clamp with thumb screw for gastro-intestinal operations which, he says, absolutely prevents escape of the contents, coaptates the mucosa, and does not crush the tissues enough to impair their vitality.

Needles Coated with Radium Emanations in Treatment of Cancer.—Jeunet is convinced that applying radium emanations on needles is the method *par excellence* for radium treatment of cancer. As many needles can be used as desired, and the practitioner can thus have it in his power to undertake a serious offensive against the malignant disease, with the minimum of discomfort for the patient, while the emanations are carried into the depths of the tumor, just where they are most needed. The needles lose their potency in about four days, but they can be recharged. This requires merely an accessible industrial source for production of the emanations. He remarks that the works of Danne, in particular, have aided in rendering this feasible. The needles are much like ordinary sewing needles, the surface is covered with the emanation like a coating of mist. As the emanation is easily wiped off, it is coated outside with collodion or celluloid. The emanation content of each needle is tested with the gold-leaf electroscope. With these needles the practitioner, he says, can induce the complete retrogression of certain neoplasms, render others operable, ward off or abort recurrence, abolish pain, deodorize, and otherwise "cure morally" the inoperable and incurable cancers. Jeunet does not give further specific directions or mention any concrete experiences.

March 20, 1919, **27**, No. 16

*Uremia with Retention of Urine. F. Legueu.—p. 141.
*Traumatic Headache. R. Benon.—p. 142.
*Chronic Nephritis and the Previous Condition. M. Nathan.—p. 143.

Uremia with Retention of Urine.—Legueu refers to the uremia with prostatic or other retention of urine, readily curable by evacuation of the urine. Ambard's coefficient has little or no significance in these cases, as the kidneys may be intact. Catheterization several times a day will cause the prompt subsidence of azotemia from this cause. The thirst, the digestive disturbance, the polyuria, the susceptibility to infection, are explained by the distention of the bladder, but they may occur even with incomplete retention, and the uremia may increase to a fatal termination unless the poisoning from the incompletely voided bladder is recognized in time. The diet and drugs are far less important than systematic voiding of the urine. Otherwise the pressure on the ureter mouths causes disturbance which may reach to the kidneys and modify their secretory functioning. With azotemia of less than 1 gm., the Ambard constant may prove instructive; with over 1 gm. the degree of uremia is the main feature of the case. This must be supervised and brought down to 1 gm. before any operation, even cystostomy, is attempted for the prostatic lesion responsible for the retention. With uremia up to 2 gm., any operation of the kind would be inevitably fatal, even under local anesthesia, while the subsidence of the uremia under regular voiding of the bladder prepares the patient for the operation on the prostate.

Traumatic Cephalalgia.—Benon describes the primary, immediate and essential post-traumatic cephalalgia which is sometimes encountered after war wounds or aerial shock. It calls for tranquil surroundings and out of door life. Lumbar puncture does not benefit and may even aggravate the condition.

Chronic Nephritis.—Nathan cites some instances to illustrate the way in which Bright's disease searches out and aggravates the preexisting weak points in the body. *Chacun fait son brightisme avec son passé et son hérédité.* The localization of the symptoms at first depends essentially on the preexisting state; apparently extinct lesions are liable to flare up under its influence and mask the causal kidney disease. Treatment should be directed to the kidneys to attenuate the superposed nephritic phenomena. This is the only way to study these complex cases which form the daily bread of pathology. By treatment on this basis, the masked "brightism" can perhaps be kept under control, with long survival and a fairly active life.

Revue Mens. de Gynécologie, d'Obst. et de Péd., Paris

February, 1919, **14**, No. 2

*Cesarean Section Versus Instrumental Dilation. Carlini.—p. 49.
Fibromyxoma of Round Ligament. C. Walther.—p. 60.

Instrumental Dilation.—Carlini writes from Bossi's clinic to extol the benefits of instrumental dilation in appropriate cases, describing twelve cases. He criticizes some recent reports on vaginal cesarean section, declaring that the cases in which it was applied would have fared better with instrumental dilation. Any practitioner can apply the latter, he reiterates.

Deutsche medizinische Wochenschrift, Berlin

Jan. 9, 1919, **45**, No. 2

Study of Causes and Conditioning Factors. (Ursachenforschung, Ursachenbegriff und Bedingungslehre.) O. Lubarsch.—p. 33. Commenced in No. 1, p. 1.
*Nitrogen or Air in Artificial Pneumothorax. K. Henius.—p. 36.
*Latent Infection. A. Loeser.—p. 37.
*Pseudomembranes in Air Passages with Influenza. S. Meyer.—p. 38.
Influenza and Pulmonary Tuberculosis. Rickmann.—p. 39.
*Poliomyelitis in German Army. A. Stern.—p. 40.
*Intraspinal Anesthesia. H. Frank.—p. 41.
Treatment of Gonorrhea in the Female. Weinberg.—p. 42.
*Butter Gruel in Infant Feeding. K. Ochsenius.—p. 42.
*Poisoning from Treatment of Varicose Veins. F. Hammer.—p. 45.

Absorption of Air and of Nitrogen with Artificial Pneumothorax.—Henius reports research on a dog injected in turn with air and with nitrogen to induce pneumothorax. The tabulated findings show that air is not absorbed any more rapidly than nitrogen, and hence that air can successfully compete with nitrogen for production of artificial pneumothorax in man.

Latent Infection.—Loeser expatiates on the lessons learned during the war in regard to the danger from latent infection. Aside from the gonococcus, latent infection in the genital tract of women may be of dire importance for the course of the puerperium. The saprophytes acquire virulence under the traumatic conditions of parturition. The constitution and the latent infection anywhere in the body form a vicious circle when the vitality gets depressed from any cause. The metabolic products from latent infection may also possibly be a factor in arteriosclerotic processes and in the growing old of the tissues.

Pseudomembranous Obstruction of Air Passages in Influenza.—Meyer has encountered fifteen cases of this kind; the age ranged from 1 to 40 years. All these patients had fever up to 40.4 C. (106 F.). Notwithstanding the diphtheria-like symptoms, there was no deposit to be seen in the throat or tonsils, but in six of the eight fatal cases the larynx, trachea and bronchi were scattered with patches of pseudomembranes firmly attached to the mucosa. The seven patients who recovered expectorated for a long time a thick, fibrin-rich yellow sputum. Diphtheria antitoxin was given in every case, as it was impossible to exclude diphtheria positively, and he ascribes the recovery mainly to this although it had no specific action. An emergency tracheotomy was done in six cases, but the progressive pseudomembrane production continued unchecked or the heart gave out. Intubation proved successful in two children.

Poliomyelitis in the Army.—Stern reports that five soldiers with poliomyelitis reached his hospital on the eastern front, all within a short period, and all from the Ukraine front. The paralysis retrogressed more or less completely in each case, although in one there was evidently superposed hysteria. Nothing was known of an epidemic among children, and there was nothing to indicate syphilis in any case, but in two instances, attention had been called to the great mortality among poultry at the time.

Spinal Analgesia.—Frank emphasizes that the anesthetic should be allowed to flow into the spinal cavity almost spontaneously. The term "injection" is in itself misleading, although the syringe has to be used. The whole should be done extremely slowly and gently, the patient breathing deep

to aid in absorption of the venous blood and thus ensure even distribution of the cerebrospinal fluid and aid in warding off syncope. In his nearly a thousand applications of this technic, he never observed any threatening effects even when the analgesia extended to the nipple line. The only contraindications are sepsis and organic or functional disease of the central nervous system.

Butter Gruel in Infant Feeding.—Ochsenius extols the fine results obtained with a gruel made with 7 gm. butter; 7 gm. flour, and 5 gm. sugar in 100 gm. of the vehicle. The butter is heated and stirred with a wooden spoon until it foams and the odor of fat acid disappears, which occurs in from three to five minutes. Then the fine wheat flour is added and blended with the melted butter and cooked on an asbestos plate until the whole is thin and brownish (about four or five minutes). Then the warm water and sugar are added, and the whole boiled up and forced through a hair sieve; then the boiled and cooled milk added. The proportions between the butter and the flour must always be the same, but the other ingredients can be modified. This is the Czerny-Kleinschmidt *Buttermehlsuppe* and the experiences published with it to date have been very satisfactory. This has been confirmed by Ochsenius' experience in seventy-six cases in the course of the last half year, including his own infant. The rule is to give not more than 80 gm. at a feeding. He was impressed with the transformation of the nervous, restless, crying children into a phase of quiet, smiling content, on this food. He never witnessed such a rapid change under other methods of feeding. It proved particularly useful for infants with incipient or established intolerance for cow's milk; some gained up to 300 gm. a week.

Mercurial Poisoning from Local Treatment of Varicose Veins.—Hammer injected 1 c.c. of a 1 per cent. solution of mercuric chlorid, fractioned, in the much enlarged, ulcerated vein on the leg. The patient was a robust woman of 36 who had two living children out of five pregnancies. Vomiting and diarrhea followed in an hour and a half, with anuria, edema, and fatal collapse the twelfth day. The injections were made strictly according to Linser's technic. The products of putrefaction in the ulcer probably cooperated in the violent reaction. The drug was injected hoping to induce immediate coagulation in the vein, to obstruct it, but this evidently did not occur.

Schweizer Archiv f. Neurol. und Psychiatrie, Zurich

1918, **3**, No. 1

*Paralysis from Centripetal Contraction. M. Egger.—p. 1. In French.
Malformations of the Cerebellum. R. Brun.—p. 13.
*Varieties of the Babinski Reflex in Diagnosis. R. Bing.—p. 89.
The Ganglia of the Forebrain. E. Landau.—p. 95.
Different Categories of Mental Tests. E. Claparède.—p. 102. In French.
Weakness and Small Size of Left Leg After Early Trauma of Brain. D. Pachantoni.—p. 119. In French.
Hysteria in Prisoners of War Interned in Switzerland. A. Repond. —p. 128. In French.
Are the Alcoholic Degenerates? H. Preisig and K. Amadian.—p. 147. In French.
*The Biochemistry of the Brain. G. Pighini.—p. 177. In Italian.

The Mechanism of Hemiplegia.—Eggers presents what he calls a new conception of hemiplegia. He declares that the classic conception of the rôle of the pyramidal tracts does not harmonize with what is observed in hemiplegia. The subject in time regains the use of his leg for walking and the movements connected therewith, while the volitional movements persist as defective still as they are in the arm. The five examples of hemiplegia under prolonged control, which he describes, apparently demonstrate that the degeneration of the pyramidal tract paralyzes only centripetal contraction and leaves centrifugal contraction practically intact. In other words, it paralyzes only the apparatus for volitional movement.

Varieties of the Babinski Reflex.—Bing's study of the Babinski reflex in the purely cerebral and the purely spinal cases of spastic paralysis, with their transitional forms, is based on 246 cases. Among other points to which he calls attention is the absence of the Babinski reflex in cases of amyotrophic lateral sclerosis; it was absent in all of his six cases in this category. In six cases of *état lacunaire* of the brain, the Babinski was positive in five, but the reflexogenous zone was restricted to the sole.

The Biochemistry of the Brain.—The articles in the *Archiv* are all in German except when otherwise specified. Pighini's research on this subject is merely summarized here from a course of five graduate lectures recently held at Turin.

Annali d'Igiene, Rome

January, 1919, **29**, No. 1

Development of Cholera Peritonitis in Guinea-Pigs. G. Sanarelli.—p. 1.
Bactericidal Properties of Garlic, Lemon Juice, etc. C. Sarti.—p. 4.
Prevalence of Influenza Bacillus in Epidemic at Rome. M. Carpano. —p. 15.

Gazzetta degli Ospedali e delle Cliniche, Milan

March 2, 1919, **40**, No. 18

*Shoulder Presentations in Different Countries. A. Ippolito.—p. 137.

March 9, 1919, **40**, No. 20

Symptomatology with Projectile in Chest. G. Pisanò.—p. 155.

Frequency of Shoulder Presentation in Different Countries. Ippolito cites statistics from six different countries which show that the proportion of shoulder presentation ranges from 0.35 per cent. (America) and 0.36 (England) to 0.58 (Germany) and 0.66 (France) to 0.71 (Austria). Italy, on the other hand, has an average of 1.40 per cent. shoulder presentations, according to the figures of Pasquali and Corradi, but Ippolito in 10,000 deliveries in twenty years of practice in Sicily has encountered shoulder presentation only in 0.12 per cent. He theorizes to explain this great difference, saying that a tendency to shoulder presentation seems to be an ethnic-anthropologic phenomenon. Comparing the average height of the different races shows that shoulder presentation becomes less frequent the taller the women; least in Anglo-Saxons, it is most frequent in the Slavic races of Austria. At the same time, the distance between the lower margin of the xiphoid appendix and the upper margin of the pubic symphysis seems to be remarkably constant in women, irrespective of their height, Nature striving to maintain an ample vertical diameter in the abdominal ovoid. Sicilian women are short, but the shortness is in the legs; the length of the trunk and the distance between the xiphoid appendix and the pubis are rather above the average than below. He insists, therefore, that the xiphopubic measurement is one of the most important obstetric measurements for oversight of conditions in pregnancy and delivery. He ascribes to the clothing, the absence of corsets and of factory work, the physiologic development of the genital sphere in the women of Sicily.

Policlinico, Rome

March 23, 1919, **26**, No. 12

*Albumin in the Sputum. F. Durand.—p. 353.
*Ascariosis. A. Rotolo.—p. 363; R. Bellantoni.—p. 364.
Quinin in Prophylaxis of Influenza. Alessandro.—p. 364.

March, 1919, **26**, Surgical Section No. 3

*Projectile in the Heart. I. Scalone.—p. 81. Conc'n.
*Ether and Chloroform and the Leukocyte Count. C. Oliva.—p. 96.
Secondary Hemorrhage with Gas Gangrene. P. Amorosi.—p. 108.

Albumin in the Sputum.—Durand examined the sputum for albumin in 120 cases of pulmonary tuberculosis and in large numbers of cases of pneumonia, simple catarrh, etc. The findings corroborate the assumption that albumin in the sputum has no diagnostic significance, but that it is important for the prognosis. The quantitative variations in the albumin content are proportional to the activity, the extent and the depth of the pulmonary lesion.

Ascariosis.—Rotolo reports that a previously healthy woman of 26 developed a condition diagnosed as influenza just before delivery of her first child. The puerperium was apparently normal but the thirteenth day came a dull pain in the right hypochondrium, and the eighteenth day a chill and fever, subsiding by the next day. That same evening a violent prolonged chill and fever to 104 F. were accompanied by intense exaggeration of the continuous pain in the right hypochondrium. By exclusion and the history that an ascaris had been passed a few days before, Rotolo was inclined to incriminate helminths, and under santonin a tangled wad of six long ascarides was passed, with three others later, and

all local and general disturbances ceased at once and permanently.

Projectile in Heart.—The preceding instalment of Scalone's article was mentioned in these columns, April 26, p. 1620. His conclusions from extensive study of the immediate and remote effects of war wounds of the heart are to the effect that a projectile loose in the heart cavity should always be removed on account of the danger of its being swept along. When the projectile is embedded in the myocardium, its removal will not undo the injury already inflicted on the myocardium, and may materially aggravate it. If it is not causing grave disturbance of the intrinsic innervation of the heart, he thinks it is wiser to leave it untouched. In every case the advantages and drawbacks of an operation should be carefully balanced before deciding; the question is not one of technic but of physiopathology.

The Leukocytes with Chloroform and Ether.—Oliva's experiments on rabbits confirmed the general assumption that ether does not induce leukocytosis, like chloroform, and does not seem to display a toxic action on the liver and other tissues.

Riforma Medica, Naples

March 8, 1919, **35**, No. 10

No Benefit from Phenol by the Vein in Influenza. G. Pieraccini.—p. 185.
Influenza at Mantua. A. Visentini and G. Bono.—p. 186.
Diagnosis of Active Pulmonary Tuberculosis. G. Sofrè.—p. 191.
The Proposed Minister of Health. A. Botti.—p. 199.

Rivista Critica di Clinica Medica, Florence

Feb. 8, 1919, **20**, No. 6

Eosinophilia with Helminthiasis. A. Martiri.—p. 61. Cont'n.

Feb. 22, 1919, **20**, No. 8

Diagnosis of Influenza and Catarrh. C. Minerbi.—p. 85.
*Objective Sign of Cardiac Neurosis. C. Minerbi.—p. 87.

Objective Sign of Neurosis of the Heart.—Minerbi has the subject lie supine and he then lifts the legs nearly vertical. As he lets go of the legs, he tells the subject to lower them himself, very slowly and gradually, not to let them fall loose. The outline of the heart has been previously determined and it is determined anew at once after this maneuver. In physiologic conditions, the upper outline of the heart will be found at least 2 or 3 cm. below what it was before. There is evidently a symmetrical retraction of the auricles, but the rest of the outline is found unmodified. In cases of a neurosis of the heart, however, the outline will be found incredibly shrunken all around—a universal retraction toward the center of the heart.

Archivos Brasileiros de Medicina, Rio de Janeiro

December, 1918, **8**, No. 12

*Hemostatic Serum. F. Magalhães.—p. 735.
Mongoloid Idiocy. E. Meirelles.—p. 738.
Hemiplegias. F. Esposel.—p. 750.

Hemostatic Serum.—Magalhães discusses the use in obstetrics of the hemostatic serum made at the Instituto de Butantan by O. Veiga. It is merely the coagulating elements isolated from normal horse serum, by diluting to one half and treating with a saturated solution of ammonium sulphate. In a threatening case of internal hemorrhage from tubal abortion, Magalhães injected by the vein 5 c.c. of this hemostatic serum, while efforts were made to reanimate the woman. In half an hour the condition was entirely satisfactory; the blood evidently clotted soon. In another case, cesarean section required for placenta praevia had been preceded by intravenous injection of 5 c.c. of this hemostatic, and he was impressed with the advantages from it.

Archivos do Inst. Bact. Camara Pestana, Lisbon

1918, **5**, No. 1. French Edition

*Experimental Syphilis in the Rabbit. F. Pulido Valente.—p. 1.
*Prevalence of Helminths in Lisbon Children. I. Paes.—p. 17.
*Etiology and Pathology of Paretic Dementia. F. P. Valente.—p. 29.
*Prophylactic Treatment of Rabies. M. Athias and P. Da Silva.—p. 89.
Early Infection of Subarachnoid Space in Syphilis. F. Pulido Valente and J. P. P. Miguens.—p. 101.
*The Pirquet Skin Tuberculin Reaction. J. B. Lopes.—p. 103.
Diphtheria at Lisbon. N. Bettencourt.—p. 111.

Experimental Syphilis in the Rabbit.—Pulido Valente remarks that his findings did not accord altogether with those that have been reported by others, as he explains in detail. See second abstract below.

Helminths in Lisbon Children.—Paes states that no systematic investigation of intestinal worms has ever before been made in Portugal in either children or adults. She had the stools of 503 children examined, and helminths were found in 54.1 per cent. The helminths represented were trichocephalus (44.7 per cent.); ascaris (18.1 per cent.); dwarf tapeworm (6.5 per cent.); and the oxyuris in 2.2 per cent. In some of the children there was more than one species. The largest proportion with helminthiasis were between 2 and 4 years old. After 9, the proportion rapidly declined.

Pathogenesis of General Paralysis.—Pulido Valente's three articles are accompanied by six fine colored plates and extensive bibliography. His research has confirmed the early penetration of the pale spirochetes into the meninges. He has found them in the cerebrospinal fluid as early as the second month after infection. The pale spirochete that induces paralysis seems to have become modified and to have acquired especially injurious properties in respect to nerve tissue. The difference in aggressivity for the nerve tissue displayed by different generations of the same strain of spirochetes was strikingly demonstrated in his experimental research. An interesting problem is to determine whether the pale spirochete inducing paretic dementia has become resistant to our therapeutic measures. Ehrlich was inclined to accept this as the cause of the failure of specific treatment in paretic dementia.

Rabies at Lisbon.—In 1913 and 1914, 3,477 persons were given antirabic treatment at the institute; nine persons died during treatment or in less than two weeks afterward, and two died later. The number treated has constantly increased but the mortality has dropped from 1.75 per cent. in 1895 to zero in five recent years; it was 0.06 and 0.10 in the two years in question. Cats, cattle, asses, monkeys and wolves had been incriminated as well as 1,634 dogs and forty-two human bites. One child of 7 developed rabies nine months after the antirabic treatment.

Skin Tuberculin Reaction.—Lopes concludes from application of the Pirquet test to 312 children and 218 adults that it may be regarded as almost infallible for young children. The reliability decreases in inverse proportion to the age. In the much debilitated, the absence of the reaction always proves an unfavorable sign.

Brazil-Medico, Rio de Janeiro

Feb. 8, 1919, **33**, No. 6

*Leprosy at Rio de Janeiro. F. Terra.—p. 41. Conc'n.
Influenza at Rio. R. Da Silva.—p. 44.

Leprosy at Rio.—Reviewed on page 1335, May **3**.

Medicina Ibera, Madrid

Feb. 1, 1919, **6**, No. 65

Nephritis. S. Pascual.—p. 101. Cont'n.
*Doses for Children. J. A. Sierra.—p. 105.
Fracture of Surgical Neck of Humerus. Corrales.—p. 106.

Feb. 8, 1919, **6**, No. 66

Mercury Cyanid by the Vein in Severe Syphilis. J. Algora.—p. 128.
Horny Papilloma of the Prepuce. Sicilia.—p. 132.

Doses for Children.—Sierra comments on the absurdity of any formula to be applied to all children, indiscriminately, by age alone. He advises fractioning the dose and increasing it until the desired result is attained, watching out closely for individual intolerance which may compel the complete suspension of the drug. For infants under a year old, he begins with the fifth of the adult dose, fractioning it through twenty-four hours. From 1 to 4 years old, the fourth of the adult dose; from 3 to 6, a third, and from 6 to 15, a half.

Plus Ultra, Madrid

November, 1918, **1**, No. 5

*The Mechanism of Skiascopy. II. M. Márquez.—p. 239.
Recent Progress in Ophthalmology T. Barraquer.—p. 248.
*Diagnosis of Incipient Pulmonary Tuberculosis. R. Hyvert.—p. 249.

Recent Progress in Bacteriology. L. Lamas.—p. 258.
Case of Abdominal Contusion. F. Pagés.—p. 263.
Recent Progress in Hydrology. H. R. Pinilla.—p. 267.
*Danger of Apparent Death During Times of Epidemic Disease. Lecha-Marzo.—p. 270.
Recent Progress in Urology. I. S. Covisa.—p. 272.
Recent Progress in Heart Disease. A. Mut.—p. 276.
*Roentgen Treatment of Epithelioma of the Penis. J. and S. Ratera.—p. 282.
Recent Progress in Therapeutics and Pharmacology. S. Banús.—p. 284.
Case of Disease of the Protuberance. C. Juarros.—p. 287.
Graphic Record of Mental State in Dementias. G. Bosch and A. Mó.—p. 289.
Data for Interpreting the Analysis of the Gastric Juice. F. F. Martinez.—p. 293.

Skiascopy.—In this second article on the mechanism of skiascopy, Márquez presents experimental data to sustain his assumptions, with six additional charts.

Diagnosis of Incipient Tuberculosis.—Hyvert's article is accompanied with five fine roentgen plates, nearly 11 by 15 inches in size, besides a number of smaller illustrations, and he emphasizes the instructive points in each for the diagnosis of incipient tuberculosis.

Danger of Apparent Death During Epidemics.—Lecha-Marzo's research on means to distinguish between real and apparent death has been described in these columns at different times, as on page 1010, Sept. 29, 1918. He here reiterates that in countless healthy persons and in 1079 persons of both sexes and in many hundreds of cases of diseases of the eye (which he lists separately) the reaction of the tears during life was invariably alkaline. Tested after death, by slipping a scrap of litmus paper under the eyelid, the reaction equally invariably veered to acid. The change was sometimes evident in half an hour, and only exceptionally took up to several hours.

Roentgen Treatment of Epithelioma of the Penis.—Ratera applied 28 roentgen units, June 18, 1915, and 21 units, June 19, treating the lesion afterward with a zinc oxid salve. By October the cancer had entirely disappeared, and there has been no return during the three and a half years to date.

Repertorio de Medicina y Cirugia, Bogotá

February, 1919, **10**, No. 5

*Drugs Contraindicated in Pregnancy. G. Muñoz.—p. 227.
Renal Tuberculosis. M. Mendez S.—p. 241.
Glaucoma. C. M. Pava.—p. 245.

Drugs Contraindicated in Pregnancy.—Muñoz asserts that he views with horror the administration of potassium iodid to pregnant women, as he has seen it induce abortion, kill the fetus in the later months, and even sacrifice the nursling, when the drug had been used for local application to the breast. He reports a case of each of these contingencies. Iodin seems to act like a stimulant; it exaggerates the menstrual flow and may induce actual hemorrhage. Both iodin and potassium iodid have been extolled by Russian physicians as effectual in typhus. Muñoz' experience confirms the benefit from potassium iodid in treatment of inveterate amenorrhea in robust women; also by hypodermic injection in treatment of the neuralgias of diabetics, instead of morphin. He warns further that morphin should not be given when there is nephritis with albuminuria.

Revista de la Asoc. Medica Argentina, Buenos Aires

December, 1918, **29**, No. 169

Memoirs of a Hygienist. E. R. Coni.—p. 709. Cont'n.
Tracheobronchial Glandular Disease in Children. J. P. Garrahan and O. S. Dastugue.—p. 758. Conc'n.
Action of Epinephrin on Muscular Fatigue of Frogs and Toads. J. Guglielmetti.—p. 774.
*Treatment of Obesity. L. O. Romero.—p. 796.
Record of Oscillometer Pulse Findings. F. L. Soler.—p. 813.

Treatment of Obesity.—Romero remarks that charlatans' advertisements, promising "to reduce the weight by 30 pounds" if their medicines are taken, have educated the public to believe that it is a simple and prompt matter to cure obesity. The physician has to start from the foundation and instruct and train the patient to be the guardian of his own health. In order to reestablish the functional balance, indispensable for the cure, extremely minute and detailed examinations and supervision of the metabolism, etc., are necessary. Romero's experience has taught him that the obstacles for success do not come from the patient himself so much as from the prejudices of those around. He outlines a ten months' course of treatment. The first month he devotes to resting the digestive and muscular apparatus, beginning with two days allowing only water, and two purges with a twenty-four hour interval. A mixed diet is then allowed, with green vegetables, cooked without condiments, and in small amounts. No drinking with meals. Thorough mastication is enforced, and Romero takes some of the first meals with the patient to train in careful mastication. All fatigue is avoided, even walking to the office. Every day the patient is weighed, always at the same hour, after stool, fasting and unclothed. The general health improves and up to 10 pounds may be lost the first month.

Psychotherapy is important to counteract the prejudices and fears of friends, and to educate the weak will of the obese. The second month, slow gradual myotherapy is begun, with gymnastic exercises under the physician's supervision. By the third month the benefit has been so pronounced, usually, that the patient is full of enthusiasm, but still the muscular exercise must be promoted with skill and tact; persuasion and energy are necessary. If the physician fails to make the muscular exercise a pleasure and have it done with conviction, the course of treatment will fail. Careful breathing exercises are important likewise, and air baths and sun baths can be begun as also organotherapy, at this time, if it is indicated. In the fourth month he suppresses meat and applies massage to the main deposits of fat, with hot or cold douches, a cold shower after a rapid walk or sun bath. The fifth month he tries the effect of suppression of salt for a time, giving nothing but fruits and whole bread for a few days. In the three following months all this treatment by the natural agents, myotherapy and elimination of waste, is kept up, and meat is allowed on certain days to make up for the muscular play, but very little salt and not much butter are permitted. During the last two months the effect on the weight of different articles of food is studied, and the patient is impressed anew that the final outcome depends on the functional balance, which is under the control of his strong will power that has been gradually developed. Romero insists that obesity in the young and in the aged should be combated on the same plan. In other affections, the patient is usually a passive element in the treatment, but in treatment of obesity the patient must work out his own salvation, and the physician's task is to get him to do this. Mental indecision is one of the most prominent features of the syndrome of obesity. Romero gives no details of special cases.

Revista Clinica, Medellín

March, 1918, **2**, No. 8

Quinin Prophylaxis on Colombia Railroad. E. Henao.—p. 342.
The Pathogenic Rôle of the Trichocephalus. W. Montoyo.—p. 353.

Revista de Med. y Cirugia Practicas, Madrid

Feb. 21, 1919, **122**, No. 1543

*Furuncle on Lower Lip. E. A. Sainz de Aja.—p. 193.
Tin in Treatment of Mammitis. E. Chome and A. Frouin.—p. 195.

Furuncle on Lower Lip.—In de Aja's two recent cases, household remedies had been long applied before he saw the patients, and the furuncle had perforated inward into the mouth, causing a most distressing condition. The cases teach the importance of antistaphylococcus vaccine early in a case of furuncle on the lower lip as this class of lesions seem to be exceptionally acute and virulent.

Semana Medica, Buenos Aires

Feb. 20, 1919, **26**, No. 8

Another Case of Granulomatosis. C. B. Udaondo and J. E. Carulla.—p. 181.
Poisonous Anise. Palet.—p. 185. See Buenos Aires Letter, p. 1309.
*Tuberculosis of Seminal Tract. A. Sacco.—p. 188.
Sublingual Lipoma. R. Becco.—p. 195.
Public Hospital System in Bolivia. N. M. Villazón.—p. 197.
Jalap in Therapeutics. S. Velazquez de Castro.—p. 198.

Tuberculosis of Seminal Tract.—Sacco reports that he had 33 per cent. of failures in his cases of genital tuberculosis in men treated by simple castration. On the other hand, 100 per cent. permanent cures were realized by systematic orchivasovesiculectomy as he describes in detail. His analysis of the literature on tuberculosis of the seminal tract shows that widely diverging views are held by different surgeons. None of them have reported 100 per cent. cured as he realized in those of his eight cases of genital tuberculosis treated by this "ideal castration."

Siglo Medico, Madrid

Feb. 1, 1919, **66,** No. 3399

Autointoxication. D. J. M. Rosell.—p. 85. Conc'n.

Feb. 15, 1919, **66,** No. 3401

*F. Balmis and His Work. J. M. A. Sanz.—p. 125.
*Thyroid-Heart Disease. A. Del Cañizo.—p. 130. Commenced in No. 3399.—p. 81.
Infectious Jaundice. M. Vila.—p. 132.

Balmis and His Work.—This year is the centennial of the death of this early missionary of vaccination, sent out by Spain to vaccinate the New World.

Cardiothyroid Disease.—Del Cañizo discusses the severe functional disturbance in the heart action liable to be entailed by excessive thyroid functioning with or without actual exophthalmic goiter. All the goiter-heart cases fall into two groups (1) those with extremely toxic hyperthyroidism entailing severe functional derangement of the heart action, and (2) those with chronic goiter but the symptoms of toxic action from the thyroid are mild, and yet the heart is organically impaired. He cites examples of each of these two types and remarks that the difference between them is mainly that of time. Acutely fatal exophthalmic goiter, as in a case he describes in a previously healthy young woman after a severe emotional shock, represents the extreme of Type 1. In time, however, they all settle down into the chronic form of Type 2.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

Feb. 8, 1919, **1,** No. 6

*Fermentation in Urine with Pyelitis. J. T. Peters.—p. 441.
*Index of Nutritional Condition of Schoolchildren. C. J. van der Loo.—p. 447.
Is there Underfeeding Among Amsterdam Schoolchildren? C. F. T. v. Ziegenweidt.—p. 454.
Index of Nutritional Condition of Antwerp Schoolchildren in Recent Years. M. C. Schuyten.—p. 457.
Rupture of the Fundus of the Uterus. P. G. Rinsema.—p. 458.

Fermentation in the Urine with Pyelitis.—Peters was able to find on record only four cases like the one he recently encountered himself in which the urine was thick and ropy and showed signs of fermentation. His patient was a pregnant young woman with pyelitis and intermittent fever. This phenomenon of jellification and fermentation of the urine seems to be the work of a special variety of colon bacilli, the *Bacterium coli mobile capsulatum.* It has been called the *Bacterium ghischrogenum* by others. In the total five cases it was found in pure culture in the urine. The pyelitis in his case was evidently a pregnancy pyelitis; it subsided after the normal delivery, and the urine returned to normal after the bladder had been disinfected.

Index of Nutritional Condition of Schoolchildren.—Van der Loo remarks that as children grow taller they increase more proportionately in weight than in length, so that the weight divided by the square of the length of the body gives a fairly good index for comparison of conditions in different children or in the same child at different times.

Hospitalstidende, Copenhagen

Feb. 26, 1919, **62,** No. 9

*Congenital Defective Osteogenesis. A. Johannessen and T. Eiken.—p. 257. Conc'n.

Defective Osteogenesis—Johannessen and Eiken here describe research on congenital imperfect osteogenesis, and on its connection with genuine osteomalacia, adding considerable bibliography. They had occasion to study a typical case from the first day after birth to the necropsy at thirteen months. The anomaly seems to be due to inability to utilize calcium, rather than to a lack of calcium.

March 5, 1919, **62,** No. 10

*Fermentation Dyspepsia. T. Stenström.—p. 305.
General Review of Narcotic Action of Magnesium Salts. H. C. Gram.—p. 313. Conc'n.

Intestinal Fermentation Dyspepsia.—The condition in Stenström's case developed soon after a gastro-enterostomy, and proved persistent until ameliorated by dietetic measures under which the man gained 15 kg. in about five months.

Ugeskrift for Læger, Copenhagen

March 13, 1919, **81,** No. 11

*Syphilis and Neurorecurrence in Auditory Nerve and Labyrinth. C. Jacobsen.—p. 471.
*Fermentation Dyspepsia in Children. C. Thorsen.—p. 481.

Neurorecurrence of Syphilis in the Auditory Nerve or Labyrinth.—Jacobsen analyzes four cases in which sudden deafness, subjective noises in the ear, or vertigo with vomiting were the warning that the syphilis had invaded the organ of hearing or that the drugs used had induced a toxic action. Analysis of these and similar cases on record seems to show that part of the neurorecurrences are due to a Herxheimer reaction to arsphenamin. This reaction congestion in a nerve confined in a narrow passage through bone injures the nerve and may cause permanent trouble. But the majority of cases of disturbances in the auditory nerve are the result of actual damage from the syphilis, combined with or possibly secondary to a syphilitic meningitis. There may possibly be also a small contingent of cases in which the nerve is suffering from a direct toxic action from the arsphenamin. Even in persons with normal ears, special care should be exercised in giving arsphenamin; during the exanthem stage or a little before this, it is wiser to give the arsphenamin only in combination with mercury. With actual syphilis and neurorecurrence in the auditory nerve, arsphenamin must be pushed but it is indispensable to give mercury with it if the trouble is recent. Lund's experience with nine cases of neurorecurrence in the auditory nerve confirms anew the absolute necessity, he declares, for giving mercury for a time before beginning with the arsphenamin. In three of his cases, with infection dating from six to twelve weeks before, there had been some slight signs of vestibular neuritis. Under the associated arsphenamin and mercury treatment this became very much worse, to complete vestibular paralysis in one case. There had been very little, if any, mercury given before this. A preliminary course of mercury might have warded off injury.

Intestinal Fermentation Dyspepsia.—Thorsen remarks that while intestinal fermentation dyspepsia in infants is now a well recognized and manageable clinical picture, in older children it often is misinterpreted. Examination of the watery and frequent stools will reveal the carbohydrate dyspepsia, and the cure under treatment on this basis will confirm the diagnosis. The small intestine is incapable of digesting carbohydrates properly. The products of the fermentation irritate the mucosa of the bowel. Modifying the diet corrects conditions but this has to be long kept up, and relapses are frequent, although final restoration of normal conditions is the rule. He gives no directions as to treatment, but describes the clinical picture. A boy of 12 or 13 may have to go to stool four or five times during school in the morning, or the stools may follow the meals, the child being scarcely able to wait for the close of the meal. The child is not disturbed during the night, but the sleep is generally restless, and several thin passages and much flatus are the rule in the morning. There is also a tendency to tympanism but the appetite keeps good and the child usually seems well nourished, but inclined to lassitude to such an extent that older children find it difficult to keep up with with their class in school. Younger children are cross and cry readily, and at all ages the children find it difficult to hold their urine long, and they may occasionally wet the bed. The mother of one such child knew always by the child's lassitude and irritability when an attack of diarrhea was impending.

THE VICTORY MEETING

ATLANTIC CITY SESSION

AMERICAN MEDICAL ASSOCIATION, SEVENTIETH ANNUAL SESSION, ATLANTIC CITY, JUNE 9-13, 1919

OFFICIAL CALL

TO THE OFFICERS, FELLOWS AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION

The seventieth annual session of the American Medical Association will be held in Atlantic City, N. J., June 9-13, 1919.

The House of Delegates will convene at 10 a. m., Monday, June 9. In the House the representation of the various constituent associations for 1919 is as follows:

Alabama	3	New Hampshire	1
Arizona	1	New Jersey	3
Arkansas	2	New Mexico	1
California	3	New York	11
Colorado	2	North Carolina	2
Connecticut	2	North Dakota	1
Delaware	1	Ohio	6
District of Columbia	1	Oklahoma	2
Florida	1	Oregon	1
Georgia	2	Pennsylvania	9
Idaho	1	Rhode Island	1
Illinois	8	South Carolina	1
Indiana	3	South Dakota	1
Iowa	3	Tennessee	2
Kansas	3	Texas	5
Kentucky	3	Utah	1
Louisiana	2	Vermont	1
Maine	1	Virginia	3
Maryland	2	Washington	2
Massachusetts	5	West Virginia	2
Michigan	4	Wisconsin	3
Minnesota	2	Wyoming	1
Mississippi	1	Canal Zone	1
Missouri	5	Hawaii	1
Montana	1	Philippine Islands	1
Nebraska	2	Porto Rico	1
Nevada	1		

The fifteen scientific sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health Service are entitled to one delegate each.

The general meeting, which constitutes the opening exercises of the Scientific Assembly of the Association, will be held at 8:30 p. m., Tuesday, June 10. The various sections of the Scientic Assembly will meet Wednesday, June 11. at 9 a. m. and at 2 p. m., and subsequently, according to their respective programs.

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 9, 10, 11 and 12, and from 8:30 a. m. to 12 noon, on Friday, June 13.

ARTHUR DEAN BEVAN, President.
HUBERT WORK, Speaker, House of Delegates.
ALEXANDER R. CRAIG, Secretary.

MEMBERS OF THE HOUSE OF DELEGATES

A Preliminary Roster of the Legislative Body of the American Medical Association

The list of members of the House of Delegates for the session is incomplete, as a number of the state associations are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover delegates and of the newly elected members who have reported to THE JOURNAL in time to be included:

STATE DELEGATES

ALABAMA
S. W. Welch, Montgomery.
S. G. Gay, Selma.

ARIZONA
R. G. Stroud, Gleason.

ARKANSAS
C. P. Meriwether, Little Rock.

CALIFORNIA
George H. Kress, Los Angeles.
V. G. Vecki, San Francisco.

CANAL ZONE

COLORADO
L. H. McKinnie, Colorado Springs
J. N. Hall, Denver.

CONNECTICUT
J. E. Lane, New Haven.

DELAWARE
P. W. Tomlinson, Wilmington.

DISTRICT OF COLUMBIA
G. Wythe Cook, Washington.

FLORIDA
John S. Helms, Tampa.

GEORGIA
S. R. Roberts, Atlanta.
H. H. Martin, Savannah.

HAWAII
A. N. Sinclair, Honolulu.

IDAHO

ILLINOIS
R. J. Coultas, Mattoon.
T. D. Doan, Scottville.
E. B. Coolley, Danville.
C. E. Humiston, Chicago.
L. Hektoen, Chicago.
C. W. Leigh, Chicago.

INDIANA
Charles Stoltz, South Bend.
A. E. Bulson, Jr., Fort Wayne.
Joseph R. Eastman, Indianapolis.

IOWA
John C. Rockafellow, Des Moines.
M. N. Voldeng, Woodward.

ISTHMIAN CANAL ZONE
R. U. Runyan, Panama.

KANSAS
Charles S. Huffman, Topeka.

KENTUCKY
Carl L. Wheeler, Lexington.
W. W. Richmond, Clinton.

LOUISIANA

MAINE

MARYLAND
Randolph Winslow, Baltimore.
Thomas S. Cullen, Baltimore.

MASSACHUSETTS
J. B. Blake, Boston.
H. G. Stetson, Greenfield.
L. F. Woodward, Worcester.
F. B. Lund, Boston.
E. F. Cody, New Bedford.

MICHIGAN
A. W. Hornbogen, Marquette.
F. C. Warnshuis, Grand Rapids.
Guy Connor, Detroit.
J. G. Brook, Grandville.

MINNESOTA
George D. Head, Minneapolis.
W. H. Magie, Duluth.

MISSISSIPPI
Willis Walley, Jackson.

MISSOURI
W. J. Ferguson, Sedalia.
A. R. McComas, Sturgeon.
Franklin E. Murphy, Kansas City.

MONTANA
Rudolph Horsky, Helena.

NEBRASKA
Joseph M. Aikin, Omaha.

NEVADA
William Z. Dahl, Reno.

NEW HAMPSHIRE
Robert J. Graves, Concord.

NEW JERSEY
Luther M. Halsey, Williamstown.
Edward Guion, Atlantic City.
George H. McFadden, Paterson.

NEW MEXICO
H. A. Miller, Clovis.

NEW YORK
James W. Fleming, Brooklyn.
Dwight H. Murray, Syracuse.
Frederic E. Sondern, New York.
George W. Kosmak, New York.
Arthur J. Bedell, Albany.

NORTH CAROLINA
H. A. Royster, Raleigh.
C. P. Ambler, Asheville.

NORTH DAKOTA
Charles MacLachlan, New Rockford.

OHIO

OKLAHOMA
LeRoy Long, Oklahoma City.
Charles R. Hume, Anadarko.

OREGON

PENNSYLVANIA
W. F. Bacon, York.
G. R. S. Corson, Pottsville.
H. B. Gibby, Wilkes-Barre.
George G. Harman, Huntingdon.
Wilmer Krusen, Philadelphia.
Edward B. Heckel, Pittsburgh.
John D. McLean, Philadelphia.
David N. Dennis, Erie.
John M. Baldy, Philadelphia.

PHILIPPINE ISLANDS

PORTO RICO
Jorge del Toro, Santurce.

RHODE ISLAND
F. T. Rogers, Providence.

SOUTH CAROLINA
Edgar A. Hines, Seneca.

SOUTH DAKOTA

TENNESSEE
E. T. Newell, Chattanooga.

TEXAS
I. C. Chase, Fort Worth.
M. L. Graves, Galveston.

UTAH
Joseph R. Morrell, Ogden.

VERMONT
F. T. Ridder, Woodstock.

VIRGINIA
W. E. Anderson, Farmville.
Southgate Leigh, Norfolk.

WASHINGTON
H. H. McCarthey, Spokane.
D. E. McGillivray, Pt. Angeles.

WEST VIRGINIA
Frank LeMoyne Hupp, Wheeling.
Chester R. Ogden, Clarksburg.

WISCONSIN
C. H. Lemon, Milwaukee.
Horace M. Brown, Milwaukee.
Rock Sleyster, Wauwatosa.

WYOMING

V. 191

DELEGATES FROM THE SECTIONS

PRACTICE OF MEDICINE
George D. Head, Minneapolis.

SURGERY, GENERAL AND ABDOMINAL
Jabez N. Jackson, Kansas City.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY
F. F. Simpson, Pittsburgh.

OPHTHALMOLOGY
Walter B. Lancaster, Boston.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY
George F. Keiper, Lafayette, Ind.

DISEASES OF CHILDREN
Isaac A. Abt, Chicago.

PHARMACOLOGY AND THERAPEUTICS
A. D. Hirschfelder, Minneapolis.

PATHOLOGY AND PHYSIOLOGY
E. R. Le Count, Chicago.

STOMATOLOGY
William C. Fisher, New York

NERVOUS AND MENTAL DISEASES
Hugh T. Patrick, Chicago.

DERMATOLOGY
George MacKee, New York.

PREVENTIVE MEDICINE AND PUBLIC HEALTH
W. S. Rankin, Raleigh.

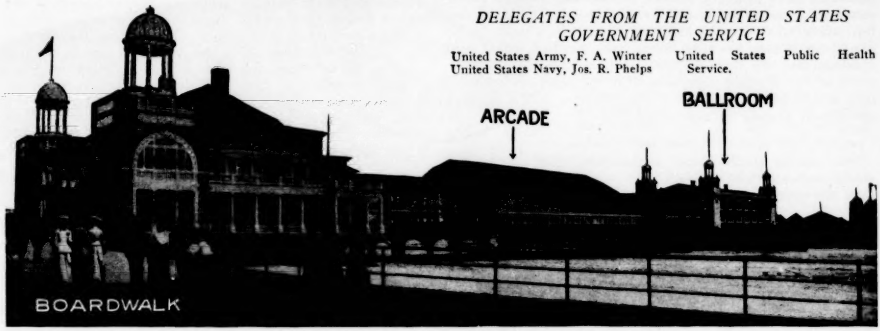
GENITO-URINARY DISEASES
Granville MacGowan, Los Angeles.

ORTHOPEDIC SURGERY
John Ridlon, Chicago.

GASTRO-ENTEROLOGY AND PROCTOLOGY
William VanValzah Hayes, New York City.

DELEGATES FROM THE UNITED STATES GOVERNMENT SERVICE

United States Army, F. A. Winter
United States Navy, Jos. R. Phelps
United States Public Health Service.



The Steel Pier—Opening Meeting, Registration and Exhibits.

ATLANTIC CITY—THE SUNRISE CITY OF AMERICA

Atlantic City, the world's best known health and pleasure resort, is built on an island of virgin sand 10 miles long and from one-fourth to 1 mile in width, over 5 miles from the shore line of New Jersey, with intervening tide water bays, thoroughfares and salt meadows. Owing to the peculiar contour of the New Jersey coast, Absecon Island faces almost directly south, which gives continuous sunshine to the entire beach front and Boardwalk from sunrise to sunset. About 90 miles at sea the Gulf Stream tempers the surrounding waters and heats the cold wintry winds that cross its ever moving path. Surrounded by water that, in winter, is many degrees warmer than the cold blasts of the north; in summer, with a temperature below the warm winds of the interior; and aided by her southerly exposure, Atlantic City's has a climate that is 10 to 15 degrees cooler than the nearby inland cities in summer and with the same variation of warmth in winter.

MOSQUITOES EXTERMINATED

The salt meadows in the rear have been so thoroughly drained and ditched by the Mosquito Commission of New Jersey that stagnant pools are entirely unknown and the proverbial New Jersey mosquito is practically a thing of the past for Atlantic City. The Anopheles has never been seen in Atlantic City, hence malaria is unknown and never existed here.

THE SUNSHINE RESORT

The average annual sunshine in Atlantic City is reported by the United States Weather Bureau at 61 per cent. as contrasted to 50 per cent. in many other places. With a freedom from factory smoke and dust our sunshine is perfectly bright and clear and gives an actinic action greatly in excess of the heavily ladened air of the interior where the particles of dust and soot absorb and reflect the violet and ultraviolet spectral rays. On this fact alone depends our greatest therapeutic climatic effects. For this reason sunburn is more common at the shore. Ocean air is particularly pure; it invigorates and gives new energy to the tired, anemic, and exhausted, to the convalescent and pleasure seekers who come seeking health, rest, appetite and sleep. Sunshine, pure air, health and pleasure are Atlantic City's commodities in trade—none others need apply.

THE BOARDWALK

Atlantic City's boardwalk is so well known to the world that it needs little comment. This unique structure extends 8 miles along the ocean front, 20 to 60 feet wide with its pine planks laid on massive concrete pillars, 8 to 10 feet above the strand. The smooth rolling chair paths and the new "herring bone" relaid decking remove the disagreeable features of the old boardwalk and make walking and roller chair riding a real pleasure. Except for six pleasure and recreation piers the ocean view from the boardwalk is unobstructed. A stroll along this structure is equivalent to a walk on the deck of an ocean liner with all of its invigorating salt breezes and stimulus, but lacking in the disagreeable rolling and tossing of the vessel. The city's side of the boardwalk is lined with metropolitan hotels, stores, amusements, theaters, movies and bathing establishments. Every nation of the globe is represented by the boardwalk merchants who are glad to show and sell Oriental, domestic and imported wares and articles of art and trade. This continued wall of buildings protects the boardwalk from the north winds of winter and the hot land breezes of summer. The boardwalk is beautifully lighted and on an evening stroll or roller chair ride under the scintillating rays of myriads of electric lights almost transform one to the realms of fairyland. Add to this the bewitching beauties of a full moon, shedding its rays on the bosom of the smooth Atlantic, and one forgets the trials and troubles of business cares and lapses into a soliloquy of sentimentalisms. Once having enjoyed this scene there is a constant longing to repeat and repeat.

The rolling chair has become a fixture and is used as a vehicle of pleasure by the strong and well, and a comfort and convenience by the sick and convalescent. The boardwalk is patrolled day and night by a courteous, thoroughly trained police force that is constantly alert for the comfort

and safety of visitors. When the crowds are largest and the ever moving kaledioscopic mass of people passes to and fro, disorder is unknown, for the atmosphere of happiness, good cheer and comradeship prevails and conventionalities are forgotten. "As safe at midnight as at noon" is the sentiment here. Twenty-four rest pavilions are provided on the ocean side where one can enjoy an easy chair and view the ocean or boardwalk.

THE HOTELS

Atlantic City has a class of hotels that is unexcelled in the world as to structure, service, comfort and cuisine. Three new million dollar structures are now being planned for the boardwalk, while others will follow in the near future. There are about twelve hundred hotels and boardinghouses that accommodate the transient thousands at prices within the reach of all. These hotels conform to the rules of an up-to-date Hotel Men's Association that provides fair treatment and honest dealing for every visitor.

BATHING

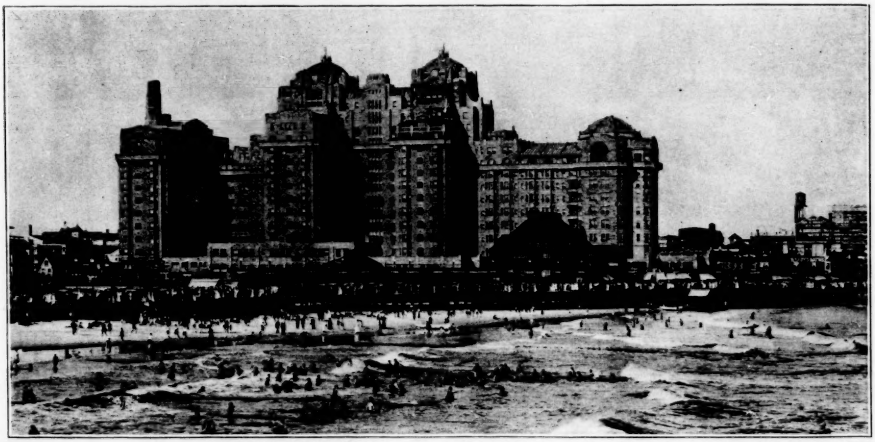
The bathing beach is one of the safest and best in the world and runs with a gradual slope to deep water. Life lines are unnecessary. The bathing beach is patrolled during bathing hours by life guards with police power who have at their command life boats and other necessary appliances. Four hospital emergency tents fully equipped and manned by competent registered surgeons and nurses are ready for the treatment of bathing accidents and minor injuries. Drownings are practically unknown in the patrolled areas. There are over thirty bathing establishments, many of which are equipped with tiled floors, showers and treatment rooms.

RECREATION

The finest theatrical productions are shown in Atlantic City. There are excellent provisions for boating, fishing and golf. Nowhere do opportunities for recreation exist that surpass those of America's chief vacation city.

THE CITY WATER SUPPLY

The municipal water supply comes from thirty-two artesian wells and cedar streams on the mainland 8 or 10 miles from Atlantic City. The artesian wells are driven through a deep bed of sand, gravel and an impervious clay bed where they tap an absolutly pure and uncontaminated water supply. These wells supply 6,000,000 gallons of water daily—enough for Atlantic City's use in her dullest times. The surface supply comes from streams that flow through virgin cedar forests and a watershed that is owned and controlled by Atlantic City and on which there are no habitations. This water is pure, safe and free from all contamination and is carried into a storage basin of nearly 300 acres area and from which water is carried as an auxiliary supply to the artesian water as the seasons' demands increase or special emergency requires. Monthly analyses covering a period of two years show a complete absence of bacteria and a sterile water from the surface sources. As a positive preventive against possible accidental contamination of the surface supply, three-tenths of one part per million of chlorin is used, even though unnecessary. The artesian and surface supplies are free from odors and taste and can be used at all times in unlimited quantities without stomach or intestinal disturbances or danger of disease. The large hotels have their own artesian wells driven to a depth of 850 feet from which an absolutely pure sparkling potable water is obtained. The general water supply of the city and hotels is free from lime salts and is a soft water. Analyses show only two grains of dissolved solids per U. S. gallon. With conditions of this kind it is positively unnecessary for visitors to buy bottled waters for table use.



View of Atlantic City's famous boardwalk and the beach showing the Traymore Hotel, general headquarters of the American Medical Association for this session.

Atlantic City's sewage is carried by a gravity system to central pumping plants where it is screened, chlorinated and pumped seven miles back of the city where it is properly disposed in thoroughfare waters.

RESIDENTIAL SECTIONS

A trip to Atlantic City is not complete without a visit to the shopping and residential sections. With 50 miles of well paved asphalt, bituminous, wood block and brick streets no cleaner or better drained city can be found. The main surface drainage is cared for by a large drainage conduit running the full length of the city to tidewater at both ends. Over 60,000 people make Atlantic City their permanent home, for they have found this the healthiest climate in the world. There are thirteen public schools; five national banks and six trust companies; thirty-five churches of every religious denomination; a white and colored Y. M. C. A.; up-to-date Atlantic City Hospital and a new Municipal Hospital for contagious diseases; a modern fire department with 180 paid firemen who have at command the most modern motorized equipment; a high pressure main in the boardwalk and hotel

district; two yacht clubs with more than 400 yachts and power boats; an up-to-date chamber of commerce and publicity bureau for promoting the city's welfare.

A CHANCE TO FLY

Atlantic City now presents the first aeroplane schedule to New York, Philadelphia and other cities. By it one can fly to Philadelphia in 25 minutes and to New York in 50 minutes and at rates not in excess of taxi rates for the same trips. Aviation trips are permanent features of Atlantic City's pastimes. Aeroplanes are seen at all hours of the day making trips to and fro along the beach front and over the city. The entire month of May, 1919, will be given over to an international aviation meet the like of which has never been seen in America. The new aviation field under the municipal control of Atlantic City is one of the largest in the country where safe landings can be made on the land or adjoining water of the bay or thoroughfare. Where time, pleasure or adventure are factors, the Atlantic City aeroplane routes will soon become very popular.

Excellent automobile roads lead from Philadelphia, New York, and other points to Atlantic City. Some of these are in process of rebuilding by the state of New Jersey and when finished no better concrete roads will be known. The United States government has dredged the inlet channel to a depth of 12 feet at low tide and Atlantic City is providing modern docking facilities for yachts and pleasure craft.

On your first visit you like Atlantic City, but when you come a second time you find it irresistible and have that contagious longing for the boardwalk, the beach, the sea baths, the swimming pools, the golf courses, and the stimulating, appetizing, soporific fresh air and sunshine. Atlantic City is now as popular in winter as in summer. It is an all year resort. All of the beach front hotels are open both winter and summer. With hotel facilities the very best; with a unique boardwalk and rest pavilions and climatic conditions unexcelled, is it any wonder that the world plays in Atlantic City and that her citizens have justly adopted the slogan: "ATLANTIC CITY ALL THE TIME."

REGISTRATION

The Importance of Registering Early—A Few Suggestions Which Will Facilitate Registration

The Bureau of Registration will be located in the Ball Room of the Steel Pier. A committee of local physicians will assist those desiring to register. A branch postoffice will be opened, and a bureau of information established in connection with the Registration Bureau. Here the conventionist may secure copies of the *Daily Bulletin* which announces the names of visitors and other important convention material.

Every one who registers will be required to fill out completely the spaces on both parts of the double registration cards, which will be found on the tables in front of the Registration Bureau. These entries should be written very plainly, or printed, as the cards are given to the printer to use as "copy" for the *Daily Bulletin*.

1. Fellows who have their pocket cards with them can be registered with little or no delay. They should present the filled out registration card, together with their pocket card, at one of the windows marked "Registration by Pocket Card." There the clerk will compare the two cards, stamp the pocket card and return it, and supply the Fellow with a copy of the official program and other printed matter of interest to those attending the annual session.

2. Those Fellows who have forgotten their pocket cards should present the filled in registration card at the window marked "Paid—No Card." The work of registration at this window will be conducted as rapidly as possible; but the necessity of finding the Fellow's name on the Fellowship roster may occupy a considerable time and will occasion inconvenience to those who neglect to bring their pocket cards with them.

3. The Fellow whose 1919 dues are unpaid should present his filled in registration card with the amount of his Fellowship dues ($5) at one of the windows marked "Cash." Here, too, there will be occasioned some delay; but the work of registering will be conducted as promptly as possible.

The panorama along the boardwalk. On the extreme left, the Shelburne Hotel; in the left foreground, the Hotel Dennis; left center, the Marlborough-Blenheim; at the right center, the Traymore Hotel and the Brighton Casino.

4. It will assist in registering if those who desire to qualify as Fellows will file their applications and qualify as Fellows by writing directly to the American Medical Association, 535 North Dearborn Street, Chicago, so that their Fellowship may be entered not later than June 1. Any applications received later than June 1 will be given prompt attention, but the Fellowship certificate and pocket card may not reach the applicant in time so that he can use this card in registering at the Atlantic City Session, and he may be required to make a second payment of his Fellowship dues, which must be held until the records at headquarters can be consulted after the close of the session, when any excess payment will be adjusted.

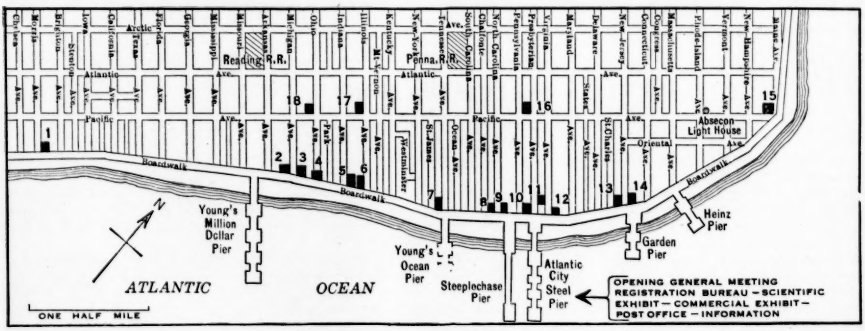
If, however, a member of the Association neglects to qualify as a Fellow before reaching Atlantic City he may be entered as a Fellow at the meeting by following procedure. He should present a filled in registration card, together with a formal application for Fellowship at the window marked "New Fellows." These applications for Fellowship can be obtained at Window No. 1 of the Registration Bureau or from the members of the Committee on Registration. In order to qualify as a Fellow, the applicant must be officially reported as a member of the constituent association of the state in which he resides, and in addition to filing this formal application, he must pay his annual Fellowship dues for the current year; if already a subscriber to THE JOURNAL, with his subscription paid for a term to or beyond Jan. 1, 1920, no additional payment is necessary. If subscription is not paid in full for the current year, the payment of a sum to extend it to Jan. 1, 1920, is required.

The registration of new Fellows will be greatly facilitated if, before leaving their homes for Atlantic City, they will provide themselves with certificates of membership issued by the secretary of their state association, certifying to their membership in good standing for 1919 in the state and county branches of the organization. A failure to provide themselves with such a certificate will necessarily subject them to some delay in registering with its consequent annoyance not only to themselves but also to others desiring to record their attendance.

POSTOFFICE

An Association Postoffice will be maintained in connection with the Registration Bureau in the Ball Room on the Steel Pier. Guests are requested to order mail addressed to them "Care American Medical Association, Steel Pier, Atlantic City, N. J.," or to their hotels, as preferred.

MEETING PLACES AND HOTEL HEADQUARTERS



KEY TO MAP

1. CHELSEA
2. SHELBURNE
3. DENNIS
4. MARLBOROUGH-BLENHEIM
5. BRIGHTON
6. TRAYMORE
7. ALAMAC
8. CHALFONTE
9. HADDON HALL
10. SEASIDE
11. BOTHWELL
12. BLACKSTONE
13. ST. CHARLES
14. BREAKERS
15. ROYAL PALACE
16. FIRST PRESBYTERIAN CHURCH
17. CRAIG HALL
18. ST. PAUL'S CHURCH

The following have been designated as general and section headquarters and meeting places* for the Victory Meeting—the Atlantic City Session, June 9 to 13:

HOUSE OF DELEGATES: *Traymore Library.*

PRACTICE OF MEDICINE: Dennis. *St. Paul's Church, Auditorium* (all meetings).

SURGERY, GENERAL AND ABDOMINAL: Chalfonte-Haddon Hall. *First Presbyterian Church, Auditorium* (all meetings).

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY: Breakers. *First Presbyterian Church, Auditorium* (Wednesday and Friday); *First Presbyterian Church, Chapel* (Thursday).

OPHTHALMOLOGY: Traymore. *Traymore, Rose Room* (all meetings).

LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Chelsea. *Traymore, Belvidere* (all meetings).

DISEASES OF CHILDREN: Seaside. *St. Paul's Church, Chapel* (all meetings).

PHARMACOLOGY AND THERAPEUTICS: Arlington. *St. Paul's Church, Lecture Room* (Wednesday and Thursday); *St. Paul's Church, Auditorium* (Friday).

STOMATOLOGY: Craig Hall. *Royal Palace, Hall B* (all meetings).

PATHOLOGY AND PHYSIOLOGY: Royal Palace. *Royal Palace, Hall A* (Wednesday and Thursday); *St. Paul's Church, Auditorium* (Friday).

NERVOUS AND MENTAL DISEASES: Brighton. *Brighton, Casino* (all meetings).

DERMATOLOGY: Blackstone. *Traymore, Belvidere* (Wednesday and Friday); *Seaside* (Thursday).

PREVENTIVE MEDICINE AND PUBLIC HEALTH: Shelburne. *Breakers, Egyptian Room* (Wednesday and Thursday); *St. Paul's Church, Auditorium* (Friday).

GENITO-URINARY DISEASES: Alamac. *Brighton, Casino* (Wednesday and Friday); *Alamac* (Thursday).

ORTHOPEDIC SURGERY: St. Charles. *Chalfonte, Room 17* (all meetings).

GASTRO-ENTEROLOGY AND PROCTOLOGY: Bothwell. *Chalfonte, Room 16* (all meetings).

MISCELLANEOUS TOPICS: *Breakers, Egyptian Room* (all meetings).

GENERAL HEADQUARTERS: Marlborough-Blenheim.

SCIENTIFIC EXHIBIT, REGISTRATION BUREAU, COMMERCIAL EXHIBIT, INFORMATION BUREAU, AND BRANCH POSTOFFICE: Steel Pier.

* Meeting places in italics.

TRANSPORTATION

Summer Tourist Rates Announced

The United States Railroad Administration, through chairmen of Passenger Traffic Committees, has advised that Summer Tourist rates will be in effect to Atlantic City, N. J., tickets being on sale from May 15 to September 30, with final return limit Oct. 31, 1919. Round trip fares from Chicago, it is announced, will be $49.02, and from St. Louis $57.96. However, there may be additional charge to cover war tax and extra fares. From other points round trip fares will be constructed on the basis of 90 per cent. of the double one way fare to Atlantic City, except that if this makes less than double the one way fare to Philadelphia, then the through rate to Atlantic City will be double the fare to Philadelphia. Those who are planning to go to Atlantic City for the VICTORY MEETING should consult the local ticket agent in their home town, in order to obtain full information regarding rates, time limits, extensions and stop-over privileges which may be had on railway tickets to Atlantic City. It is advisable to make these inquiries at an early date as local ticket agents may have to ask for the information needed and, except in the larger cities, it may be necessary to obtain a special form of ticket from some central ticket office. Neglecting to make such inquiry until just before the time for leaving home may make it necessary for the ticket agent to sell a full fare, one way ticket, since he may have neither the proper form nor the authority to sell these summer rate tickets. The importance of an early inquiry is emphasized.

Boardwalk showing entrance to the steel pier and the seaside block.

The American Medical Special

CHICAGO TO ATLANTIC CITY

"The American Medical Special" will be run for the accommodation of the Fellows of the Association who desire to go in a party from Chicago to Atlantic City to attend the VICTORY MEETING. This train is announced to run over the Pennsylvania Railway, leaving the Union Station, corner of Canal and Adams Streets, Chicago, at 10:30 a. m., Sunday, June 8. It is scheduled to arrive at Atlantic City on the following morning about 10 o'clock, in ample time to permit of being comfortably located at the hotel before the luncheon hour.

The train will be made up entirely of Pullman sleeping cars and will be provided with club and dining car service. No effort will be spared to provide accommodations so that the journey may be as comfortable and as pleasant for the Fellows who use this train as is possible. It will be noted the equipment is similar to that which has been placed at service of the Fellows on previous occasions. The one way fare from Chicago to Atlantic City on trains of this equipment is $33.69, and the round trip fare between Chicago and Atlantic City, good returning until October 31, and permitting of stop-over at any point enroute, will be $58.34. The cost of a lower berth, one way, is $5.40; upper berth, $4.32; drawing room, accommodating three persons, $19.44. The rates here quoted include war tax.

The attendance at the VICTORY MEETING promises to be large and those who are planning to attend will undoubtedly be attracted by the accommodations offered on this special. Without doubt, the available space will be quickly reserved, consequently, Fellows are urged to write at once to Mr. C. L. Kimball, Asst. General Passenger Agent, Pennsylvania Railroad, Room 841, 175 Jackson Boulevard, Chicago, in order that they may obtain further information and make reservation for sleeping car accommodations if they desire to use this train. Physicians from other cities of the West and Middle West may arrange to continue their trip from Chicago to the convention city on this train.

ACCOMODATIONS OFFERED BY ATLANTIC CITY HOTELS

Although Atlantic City is a city of hotels and can easily accommodate all who attend the annual session, Fellows are urged to make their hotel reservations early. This is especially advisable this year because many of the beach-front hotels are already booked practically to their full capacity for the week of the annual session.

The subcommittee on hotels of the local committee on arrangements, however, anticipates no trouble in accommodating with comfortable hotel accommodations those who visit Atlantic City, June 9 to 13. The Atlantic City physicians simply ask that reservations shall be arranged, as far as practicable, before the visitor starts for Atlantic City. Just as one is never so much alone as when he is a stranger in a large crowd, so the difficulties of securing hotel facilities in a city of hotels is accentuated. It will be more convenient on arriving at Atlantic City, to go at once to a hotel which is expecting you, rather than to make a round of hotels, finding a number of them completely filled, and finally being compelled to take the first lodgings which are found in a hurried personal search. The list of hotels appearing in this issue locates the different hotels and gives their rates. Make your selection, write to the manager, and take with you to Atlantic City his reply, assuring you that a reservation has been made for your use. The subcommittee on hotels, of the local committee on arrangements, Dr. D. B. Allman, chairman, will endeavor to assist you to get into communication with the manager of a hotel where you can make reservations if you find difficulty, by direct correspondence, in securing the lodgings you desire. In writing to Dr. Allman, Fellows should state the number in their party, when they expect to arrive in Atlantic City, how long they plan to remain and approximately the amount per day per person they are prepared to pay for hotel expenses. One may well leave to the local committee, as far as practicable, the choice of the hotel.

TABLES OF DAILY RATES AND ACCOMMODATIONS OFFERED BY ATLANTIC CITY HOTELS

Hotels Grouped by Streets	Plan	Rooms Without Private Bath				Rooms With Private Bath			
		For One Person		For Two Persons		For One Person		For Two Persons	
		Single Room	Double Room	Double Room	Extra Large Room	Single Room	Double Room	Double Room	Extra Large Room
Boardwalk—									
Royal Palace	American	$5.00	$7.00	$10.00	$11.00	$9.00 to $11.00		$14.00 to	$20.00
Breakers	American	6.00	....	12.00 to	15.00	7.00 to	10.00	14.00 to	20.00
Breakers	European	2.50	....	8.00 to	8.00	4.00 to	7.00	6.00 to	12.00
St. Charles	American	6.00	7.00	10.00	11.00	8.00 to	16.00	12.00 to	20.00
Haddon Hall	American	5.00 to	7.00	10.00 to	12.00	7.00 to	10.00	12.00 to	16.00
Chalfonte	American	5.00 to	7.00	10.00 to	12.00	7.00 to	10.00	12.00 to	16.00
Regent	European	1.50	2.00	3.00	4.00	3.00	4.00	5.00	6.00
Alamac	American	8.00	....	12.00	14.00	8.00	9.00	14.00	18.00
Alamac	European	4.00	....	5.00	6.00	5.00	6.00	7.00	10.00
Apollo	European	1.50	2.00	2.50	....	2.50	3.50	3.50	....
Traymore	American	8.00	....	13.00	....	9.00	18.00	14.00	24.00
Traymore	European	4.00	....	5.00	....	5.00	14.00	6.00	16.00
Brighton	American	6.00	8.00	12.00	14.00	8.00	11.00	14.00	22.00
Marlborough-Blenheim	American	7.00	8.00	12.00	....	10.00	11.00	14.00 to	21.00
Marlborough-Blenheim	European	4.00	5.00	7.00	....	7.00	8.00	9.00	16.00
Dennis	American	6.00 to	8.00	9.00	11.00	7.00 to	15.00	12.00 to	18.00
Shelburne	European	3.00	4.00	5.00	6.00	5.00	7.00	10.00	12.00
Chelsea	American	6.00	7.00	11.00	13.00	8.00	10.00	14.00	16.00
Ambassador	American	....	....	....	....	....	10.00	14.00	20.00
Ambassador	European	....	....	....	....	....	6.00	8.00	14.00
Oriental Avenue—									
Touraine	American	3.50	4.00	7.00	....	5.00	5.00	8.00	....
Touraine	European	2.00	2.50	3.00	....	3.50	3.50	4.00	....
Glenside	American	3.00	3.50	5.00	6.00	3.50	4.00	7.00	8.00
Glenside	European	2.00	2.50	3.00	3.50	2.50	3.50	6.00	7.00
Massachusetts Avenue—									
Phillips House	American	4.00 to	7.00	8.00 to	10.00	....	8.00	10.00 to	12.00
Phillips House	European	1.50 to	2.50	3.00 to	5.00	....	4.00	5.00 to	5.00
Thurber	European	1.50	2.50	3.00	5.00	....	4.00	5.00	6.00
New Jersey Avenue—									
Pierrepont	American	4.00	5.00	8.00	9.00	5.00	6.00	10.00	11.00
Lancken Cottage	European	1.50	2.00	2.00	2.00	....	....	....	....
St. Charles Place—									
Loraine	American	4.00	....	8.00	9.00	....	....	10.00	12.00
Maryland Avenue—									
Schafer Villa	European	1.25	....	2.00	2.50	....	....	....	....
Virginia Avenue—									
Blackstone	American	4.00	4.50	8.00	9.00	6.00	6.50	10.00	12.00
Blackstone	European	2.00	2.50	3.00	4.00	3.50	4.00	5.00	6.00
Berkshire Inn	American	3.00	3.50	6.00	7.00	4.00	5.00	8.00	9.00
Berkshire Inn	European	1.50	2.00	3.00	4.00	2.50	3.00	5.00	6.00
Romm	European	1.25	2.00	2.50	3.00	2.00	2.00	4.00	4.50
Whittier	American	3.50	....	6.00	7.00	....	....	....	....
Whittier	European	2.00	....	4.00	5.00	....	....	....	....
New Florence	American	3.50	4.00	7.00	8.00	....	....	10.00	....
New Florence	European	1.00	1.50	3.00	4.00	....	....	5.00	....
Victor Hall	American	....	3.00	5.00	6.00	....	....	....	....
Victor Hall	European	....	2.00	3.00	4.00	....	....	....	....
Majestic	American	3.50	4.00	6.00	7.00	....	5.00	8.00	10.00
Majestic	European	1.50	2.00	3.00	4.00	....	3.50	5.00	6.00
Grand Atlantic	American	3.50	4.00	6.50	7.00	....	7.00	8.00	10.00
Grand Atlantic	European	2.00	3.00	3.50	4.00	....	....	....	....
Calvert	American	3.50	4.00	6.00	8.00	5.00	5.50	9.00	10.00
Calvert	European	1.50	2.00	3.00	4.00	3.00	3.50	5.00	6.00
Jackson	American	....	5.00	10.00	12.00	....	7.00	14.00	15.00
Jackson	European	....	2.50	4.00	5.00	....	4.00	8.00	9.00
Bothwell	American	4.00	4.50	8.00	9.00	....	....	12.00	14.00
Bothwell	European	1.50	2.00	3.00	4.00	3.00	3.50	5.00	6.00
Wiltshire	American	4.00	5.00	7.00	8.00	....	....	10.00	12.00
Sothern	American	3.00	3.50	6.00	7.00	....	....	8.00	9.00
Sothern	European	1.50	2.00	3.00	3.50	....	....	4.00	....
Morton	American	4.00	5.00	7.00	8.00	....	....	9.00	10.00
Raymond	American	3.00	3.50	6.00	7.00	....	....	8.00	9.00
Raymond	European	1.50	1.50	2.00	3.00	....	....	....	....
Absecon	American	3.50	3.50	5.00	6.00	5.00	6.00	8.00	9.00
Absecon	European	1.50	2.00	2.50	3.00	3.00	....	6.00	....
Shoreham	American	2.50	3.00	5.00	6.00	4.00	5.00	8.00	10.00
Shoreham	European	1.50	1.50	2.50	3.00	2.50	3.00	5.00	6.00
Albemarle	American	3.00	3.50	5.00	6.00	....	....	10.00	....
Albemarle	European	1.50	2.00	3.00	4.00	....	....	....	....
Pennsylvania Avenue—									
Holmhurst	American	4.00	5.00	10.00	12.00	....	....	12.00	14.00
Holmhurst	European	2.50	3.00	.....	5.00	....	....	6.00	7.00
Upton	American	3.00	3.50	5.00	6.00	....	....	....	....
St. Clare	American	3.00	4.00	6.00	7.00	....	5.00	10.00	12.00
North Carolina Avenue—									
Colonial	American	3.00	4.00	5.00	6.00	3.50	5.00	6.00	7.00
South Carolina Avenue—									
DeLancey-Lakewood	American	3.00	....	5.00	....	....	....	....	....
Rose Lynn	European	1.00	1.50	2.00	2.50	....	....	....	....
Silverside	American	3.00	3.50	6.00	7.00	....	....	....	....
Radnor	American	2.00	2.50	4.00	5.00	....	....	....	....
Radnor	European	1.00	1.50	2.00	3.00	....	....	....	....
Watkins	American	3.00	....	5.00	6.00	....	....	....	....
Watkins	European	1.50	....	3.00	4.00	....	....	....	....
Mullica	American	2.50	3.00	5.00	6.00	....	....	....	....
Mullica	European	1.00	2.00	3.00	4.00	....	....	....	....
Trexler	American	3.00	4.00	5.00	6.00	....	....	....	....
Princess	American	4.00	5.00	8.00	9.00	....	....	....	....
Princess	European	1.00	1.50	2.00	3.00	....	....	....	....
Iroquois	American	4.00	7.00	7.00	8.00	....	....	9.00	10.00
Iroquois	European	1.50	....	3.00	4.00	2.00	....	4.00	5.00

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TABLE OF DAILY RATES AND ACCOMMODATIONS OFFERED BY ATLANTIC CITY HOTELS—*(Continued)*

Hotels Grouped by Streets	Plan	Rooms Without Private Bath				Rooms With Private Bath			
		For One Person		For Two Persons		For One Person		For Two Persons	
		Single Room	Double Room	Double Room	Extra Large Room	Single Room	Double Room	Double Room	Extra Large Room
Ocean Avenue—									
Bon Air	American	2.75	3.00	5.50	5.50	....	....	....	....
Kingston	American	3.00	3.50	5.00	6.00	4.00	5.00	7.00	8.00
Kingston	European	1.50	2.00	2.50	3.00	2.50	3.50	4.00	5.00
Tennessee Avenue—									
National	European	1.50	2.00	2.00	3.00	....	....	5.00	5.00
Elberon	American	3.00	3.00	5.00	6.00	3.00	3.50	7.00	8.00
Continental	American	3.50	4.00	7.00	8.00	5.00	6.00	9.00	10.00
Continental	European	1.50	2.00	2.00	3.00	2.50	3.00	5.00	6.00
Fredonia	European	1.50	2.00	2.50	3.00	2.00	2.50	4.00	5.00
Howard House	American	3.00	....	6.00	7.00	....	....	....	....
Howard House	European	1.50	....	3.00	3.50	....	....	....	....
Greater Pittsburgh	American	2.50	3.00	4.00	5.00	....	....	....	....
Greater Pittsburgh	European	1.50	2.00	2.00	3.00	....	....	....	....
Beaumont	American	....	....	5.00	....	....	....	....	....
Beaumont	European	....	....	2.00	....	....	....	....	....
Kenwood	American	2.00	2.50	4.00	5.00	....	....	....	....
Kenwood	European	1.00	1.50	2.00	3.00	....	....	....	....
Kenderton	American	3.00	3.50	5.00 to	8.00	....	5.00	8.00	9.00
Kenderton	European	1.00	1.50	2.50 to	4.00	....	3.00	4.00	5.00
St. James Place—									
Flanders	American	3.00	....	5.00	....	....	....	....	....
Elwood	American	3.00	3.50	5.00	6.00	3.50	....	6.00	....
Elwood	European	1.50	2.00	3.00	4.00	2.50	....	4.00	....
Devonshire	American	4.00	4.00	8.00	....	....	....	9.00	....
Thompson	American	....	2.50	4.00	5.00	....	....	....	....
New York Avenue—									
Breslin	European	2.00	3.00	3.00	5.00	2.50	....	6.00	....
Hygeia	European	1.00	1.00	2.00	2.00	1.50	1.50	2.50	2.50
Ringham	European	1.00	1.00	2.00	2.00	1.50	1.50	2.50	2.50
Netherlands	American	2.50	3.00	5.00	6.00	4.00	5.00	8.00	9.00
Belleville	American	2.50	3.50	5.50	6.00	....	....	....	....
Bellevillile	European	1.50	2.00	2.50	3.00	....	....	....	....
Chester Inn	American	2.50	3.00	5.00	6.00	3.00	3.50	6.00	7.00
Chester Inn	European	1.50	2.00	3.00	4.00	2.50	3.00	5.00	6.00
Kentucky Avenue—									
Martinique	European	2.50	3.00	4.00	5.00	5.00	6.00	7.00	8.00
New Clarion	American	3.00	3.50	5.00	6.00	3.50	4.00	6.00 to	8.00
New Clarion	European	1.50	2.00	2.00	3.00	2.00	2.50	3.00	3.50
De Ville	American	3.00	....	6.00	7.00	....	5.00	....	9.00
De Ville	European	1.00	1.50	2.00	3.00	....	2.00	3.00	4.00
Monticello	American	3.50	4.00	6.00	7.00	5.00	6.00	8.00	9.00
Monticello	European	1.50	2.00	2.50	3.00	3.00	4.00	4.00	5.00
Wellsboro	American	2.50	3.00	5.00	6.00	4.00	5.00	6.00	7.00
Wellsboro	European	1.00	1.50	2.00	3.00	3.00	4.00	4.00	5.00
Westminster	American	3.00	3.50	5.00	6.00	4.00	5.00	7.00	8.00
Westminster	European	1.50	2.00	3.00	4.00	2.00	2.50	4.00	5.00
Silverton	American	2.50	....	4.00	....	....	....	....	....
Silverton	European	1.50	....	2.50	....	....	....	....	....
Richmond	American	3.00	4.00	6.00	8.00	....	....	....	....
Richmond	European	1.50	2.00	3.00	4.00	....	....	....	....
Carnix	American	2.50	....	4.00	....	....	....	....	....
Carnix	European	1.75	....	3.00	....	....	....	....	....
Strath Haven	European	1.00	2.00	3.00	5.00	2.00	2.50	6.00	8.00
Illinois Avenue—									
Craig Hall	American	3.50	4.50	6.00	7.00	4.50	5.50	7.00	9.00
Merle Cottage	European	1.50	2.00	4.00	5.00	3.00	3.00	....	....
N. L. Burkhart, 125 S. Illinois Ave....	E	1.00	1.50	2.00	2.50	....	....	....	....
Park Place—									
Glaslyn-Chatham	American	3.50	....	6.00	7.00	5.00	....	7.00	8.00
Cheltenham-Revere	American	3.50	4.50	6.00	7.00	....	6.00	9.00	10.00
Runnymede	American	3.50	4.00	7.00	8.00	6.00	6.00	10.00	12.00
Michigan Avenue—									
Pennhurst	American	4.00	5.00	7.00	8.00	7.00	8.00	10.00	14.00
Arlington	American	3.50	4.00	6.00	7.00	6.00	7.00	9.00	10.00
Arlington	European	1.50	2.00	2.50	3.00	....	....	....	....
Edison	American	....	3.00	5.50	6.00	4.50	5.00	7.00	....
Edison	European	....	2.00	2.50	4.00	3.00	3.50	4.00	....
Bayard	European	....	1.50	3.00	4.00	....	4.00	5.00	6.00
St. Francis	European	1.00	1.50	2.50	3.00	....	2.50	4.00	4.50
Arkansas Avenue—									
Terminal	European	1.00	2.00	2.00	3.00	3.50	4.00	4.00	5.00
Emmett	American	2.00	2.50	4.00	4.50	....	....	....	....
Emmett	European	.75	1.00	1.50	2.00	....	....	....	....
Missouri Avenue—									
Worthington	American	2.50	3.00	....	....	....	....	7.00	....
Georgia Avenue—									
Miller Cottage	American	....	....	4.00	5.00	....	....	....	....
Pacific Avenue—									
Y. M. C. A.	European	1.00	....	1.50	....		(For Members Only)		
Godwin	European	2.00	3.00	5.00	5.00	....	....	....	....
Arondale	American	2.00	2.50	4.00	5.00	....	....	....	....
Arondale	European	1.00	1.50	2.00	2.50	....	....	....	....
Channel	American	2.50	2.75	4.50	5.00	3.00	3.25	6.00	6.00
Channel	European	1.00	1.25	2.00	2.50	1.50	1.75	3.00	3.00
Arctic Avenue—									
Wright's (Colored)	European	1.50	....	3.00	5.00	....	....	....	....
Wright's	American	4.00	....	8.00	10.00	....	....	....	....
Ridley's (Colored)	American	2.00	4.00	4.00	5.00	....	....	....	....
Ridley's	European	1.00	2.00	2.00	2.50	....	....	....	....

SOCIAL EVENTS AND SPECIAL MEETINGS

(NOTE.—The official badge will be required for admission to entertainments and other places to which entrance is granted to those in attendance on the annual session.)

MONDAY

The fifth tournament of the American Medical Golfing Association will be played on the links of the Atlantic City Golfing Club. Luncheon will be served at the Club House from 12 to 2, and the annual dinner of the Association as well as its business meeting will be held in the evening. Any Fellow of the American Medical Association becomes a Fellow of this Association automatically on acceptance of its by-laws and the payment of the enrolment fee of $2. For further information address Dr. Will Walters, secretary-treasurer, 1414 Chicago Avenue, Evanston, Ill. Visiting foreign physicians are invited to attend this tournament.

TUESDAY

The opening general meeting will be convened in the Music Hall on the Steel Pier at 8:30 p. m. In addition to the usual opening program, including the President's address, the foreign guests will be formally introduced.

WEDNESDAY

A VICTORY MEETING will be held in the Music Hall on the Steel Pier, convening at 8:30 p. m. At this meeting national organizations, the activities of each of which have definite medical interest, will be represented by speakers of their choice. Each speaker will be asked to respond with a short address on the general subject of American medicine and surgery as it responded in service under war conditions.

THURSDAY

At 2 in the afternoon, two large general meetings will convene on the Garden Pier. At these meetings representatives of the medical profession of foreign countries, and particularly those allied to the United States in the World War, will make addresses. At one of these meetings the subjects discussed will pertain to general medicine; the other will be devoted to surgical topics.

PRESIDENT'S RECEPTION

On Thursday evening at 8:30 o'clock, again on the Garden Pier, there will be a reception to the President of the Association and to the foreign guests.

Panorama from the Casino on the steel pier. Reading from left to right are: the Blackstone Hotel, bathing beaches, the Globe Theater; the tall building at the right, the St. Charles Hotel, and at the extreme right, the Breakers Hotel. The beach indicated is one of the best bathing beaches in Atlantic City.

INVITED GUESTS FROM FOREIGN COUNTRIES

By the authority of the Hon. Newton D. Baker, Secretary of War of the United States of America, the American Medical Association has requested the governments of the nations allied to the United States in the prosecution of the World War, through their several embassies and legations, to send representative delegations of the medical professions of their countries to participate in the coming annual session of the Association. A prominent feature of the 1919 annual session will thus be the bringing together of a representative medical assemblage to confer on the medical knowledge which has grown out of the war; to elaborate plans for cooperative interallied graduate study and research, and to cement the bonds of an enduring friendship among physicians. A number of the governments have indicated their purpose to appoint the delegates requested. Some of them have already officially advised the American Medical Association of those who have been appointed to represent the medical profession of their countries. The coming annual session will be indeed a VICTORY MEETING since it will bring together representatives of the medical profession of all the allied nations as well as of a number of the neutral powers. Belgium, Great Britain, Cuba, Norway and we understand France already have noted physicians in the United States.

HEADQUARTERS FOR WOMEN PHYSICIANS

Hotel Holmhurst will be the headquarters for women physicians who attend the VICTORY MEETING. Women physicians may secure reservations by writing directly to the management of this hotel. The dinner for women physicians will be held on Wednesday evening, June 11, at the Marlborough-Blenheim at 6:30 o'clock. The subscription price is $4 a cover. Contributions should be sent on before June 6 to Dr. Clara K. Bartlett, 4301 Atlantic Avenue, Atlantic City, N. J. Attention is called to the corrected date here given, as this dinner previously was announced for the evening of Monday, June 9.

SECTION DINNERS AND ALUMNI MEETINGS

While the program for the Atlantic City meeting is already well filled, it may be that certain sections will want to return to the custom of holding a social gathering which will not conflict with the sections. Alumni of medical schools are planning to revive their annual reunions. The Local Committee on Arrangements, through its subcommittee on Section Entertainments, Samuel Barbash, chairman, will cooperate with officers of sections and through the subcommittee on Alumni Entertainments, Worth Clark, chairman, will assist in arranging the latter functions.

MEETINGS OF NON-AFFILIATED ORGANIZATIONS

Medical Veterans of the World War

The temporary officers of the Medical Veterans of the World War are arranging for a meeting to be convened in Atlantic City on the afternoon of Tuesday, June 10, for the purpose of effecting a permanent organization. Blank forms for making application for membership in this organization may be obtained either from the office of the temporary secretary, Col. F. F. Russell, Medical Corps, U. S. Army, Army Medical School, Washington, D. C., or from the temporary president, Dr. Hubert Work, Pueblo, Colo., or by sending a self-addressed envelope to the headquarters of the American Medical Association. These forms have also been placed in the hands of those physicians who served as medical aids to the governors of the several states in the establishment and conduct of the medical advisory boards, and it is planned to shortly place a supply with the secretaries of the several constituent state associations. Those who are eligible for membership and who desire to make application should obtain and use these forms. Each application should be accompanied with a fee of one dollar, to apply to the expenses of organization. It is further planned to hold a meeting of this organization on the evening of Friday, June 13, at Atlantic City.

Meetings of Special Societies

In addition, the following organizations have announced meetings to be held at Atlantic City during the days immediately preceding the dates for the scientific assembly of the Association: American Academy of Medicine; American Association of Anesthetists; American Association of Industrial Physicians and Surgeons; American Association of Teachers of Diseases of Children; American Proctologic Society; American Therapeutic Society. During the week following the VICTORY MEETING of the Association, the Congress of American Physicians and Surgeons will hold its triannual conference at Atlantic City. At this time, June 16 to 17, the following organizations will hold their meetings: American Association of Genito-Urinary Surgeons; American Association of Pathologists and Bacteriologists; American Association of Physicians; American Climatological and Clinical Association; American Dermatological Association; American Neurological Association; American Ophthalmological Society; American Pediatric Society; American Psychopathological Association; American Society of Tropical Medicine; American Surgical Association. On June 18 to 20, the American Medico-Psychological Association will meet at Philadelphia.

THE SCIENTIFIC EXHIBIT

The feature of the Scientific Exhibit at the Atlantic City meeting will be the exhibition by the different government departments of scientific work done during and in connection with the war. As the session is to be a VICTORY MEETING, it was decided to make the Scientific Exhibit center largely around the work done for and by the government. Accordingly invitations were sent to each of the government departments, asking them to prepare and present an exhibit of the work done. Nine bureaus or division belonging to six departments have accepted the invitation and will present exhibits. This is in addition to the customary exhibit of individual research. The Scientific Exhibit promises to be one of unusual value and interest. The exhibits of the Army, Navy and Public Health Service will be located in the Exposition Building, Board Walk and Kentucky Avenue. All other exhibits will be on the ground floor of the Casino, on the Steel Pier. The exhibitors are as follows:

Government Exhibits

SHOWING THE WORK OF THE VARIOUS DEPARTMENTS AND BUREAUS RELATING TO HEALTH

Medical Department, U. S. Army.
Bureau of Medicine and Surgery, U. S. Navy.
United States Public Health Service.
Department of Agriculture, Bureau of Chemistry.
Department of Agriculture, Bureau of Entomology.
Department of Commerce, Bureau of Standards.
Department of Commerce, Bureau of the Census.
Department of Labor, Children's Bureau.
American Red Cross.

Individual Exhibitors

DR. EMIL G. BECK, Chicago: Stereoscopic Roentgenograms and Stereo-Lunnier Photography of Specimens.

ROENTGEN-RAY DEPARTMENT, BELLEVUE AND ALLIED HOSPITALS, New York: Roentgenology—Teaching Methods and Specimens.

DRS. JAMES T. CASE AND PAUL ROTH, Battle Creek Sanitarium, Battle Creek, Mich.: Dietetic Management of Diabetics; Bergell Test; Electrocardiograms; Roentgenograms.

DR. J. SHELTON HORSLEY, Richmond, Va.: Illustrations of Operations on the Gastro-Intestinal Tract Based on Physiology of the Stomach and Intestines.

LYING-IN HOSPITAL OF THE CITY OF NEW YORK: Museum Specimens and Wall Charts.

DR. MYRON METZENBAUM, Cleveland: Nasal Deformities Showing Photographs of Cases Before and After Operations.

THE MAYO CLINIC, Rochester, Minn.: Scientific Material from the Mayo Clinic Staff.

DR. HIDEYO NOGUCHI, Rochefeller Institute, New York: Experimental Work on Yellow Fever.

PRUDENTIAL INSURANCE COMPANY, Newark, N. J.: Statistical Charts on Influenza.

ST. LUKE'S HOSPITAL, New York: Roentgen-Ray Plates and Prints.

DR. FENTON B. TURCK, New York: Experimental Shock, Experimental War Wounds and Other Injuries; Pneumonias.

DR. D. T. QUIGLEY, Omaha: Results of Treatment by Radium.

DR. A. S. WARTHIN, Ann Arbor, Mich.: Pathology of Mustard Gas Poisoning; Photographic Specimens.

American Medical Association

COUNCIL ON PHARMACY AND CHEMISTRY: Charts and Samples Showing Activities of the Council with Copies of Publications.

CHEMICAL LABORATORY: Charts and Samples Showing Chemical Work of Laboratory.

PROPAGANDA DEPARTMENT: Educational Charts and Literature on Nostrums and Quackery.

COUNCIL ON HEALTH AND PUBLIC INSTRUCTION: Educational Pamphlets, Charts and Diagrams on Public Health.

Moving Picture Exhibit

The moving picture theater on the second floor of the Casino will be conducted as a part of the Scientific Exhibit, from 9 a. m. to 3 p. m. on Tuesday, Wednesday, Thursday and Friday, June 10, 11, 12 and 13. Moving picture films showing the work of medical officers in the Army and Navy and the activities of the Public Health Service will be shown, also material by private exhibitors. An illustrated talk will be given each day by the Propaganda Department of THE JOURNAL. A detailed program of the moving picture exhibit will appear in the official program.

PRELIMINARY PROGRAM OF THE SCIENTIFIC ASSEMBLY

PROGRAM OF THE OPENING MEETING

STEEL PIER, MUSIC HALL

Tuesday, June 10, 8:30 p. m.

Music.

Call to Order by the President, DR. ARTHUR DEAN BEVAN, Chicago.

Invocation. ABNER H. LUCAS, PH.D., D.D., Atlantic City.

Announcements. DR. EMERY MARVEL, Chairman of the Local Committee of Arrangements.

Address of Welcome. HON. HARRY BACHARACH, Mayor, Atlantic City.

Address of Welcome. DR. THOMAS HARVEY, Orange, N. J., President of the Medical Society of New Jersey.

Address. HON. WALTER E. EDGE, Governor of New Jersey, U. S. Senator-Elect.

Music.

Introduction and Installation of President-Elect ALEXANDER LAMBERT, New York.

Address. DR. ALEXANDER LAMBERT.

INTRODUCTION OF DELEGATES FROM OTHER COUNTRIES

Music.

THE PROGRAMS OF THE SECTIONS

Outline of the Scientific Proceedings — The Preliminary Program and the Official Program

The following papers are announced to be read before the various sections. The order here is not necessarily the order which will be followed in the Official Program nor is the list complete. The Official Program will be a pamphlet similar to those issued in previous years, and will contain the final program of each section with abstracts of the papers, also lists of committees, programs of the General Meeting, lists of entertainments, map of Atlantic City and other information. To prevent misunderstandings and to protect the interest of advertisers, it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each Fellow on registration.

SECTION ON MISCELLANEOUS TOPICS

There will be two meetings for the discussion of Industrial Medicine and Surgery—five or six additional papers are being considered. The completed program will be announced in the Official Program.

MEETS IN BREAKERS, EGYPTIAN ROOM—ALL MEETINGS

Chairman—HARRY E. MOCK, Chicago.
Vice Chairman—DAVID L. EDSALL, Boston.
Secretary—OTTO P. GEIER, Cincinnati.

Wednesday, June 11—2 p. m.

Meeting Place—Breakers, Egyptian Room

SYMPOSIUM—SCOPE OF INDUSTRIAL MEDICINE AND SURGERY

Chairman's Address. HARRY E. MOCK, Chicago.

Preventive Surgery, as Demonstrated by Industrial Practice. WILLIAM I. CLARKE, JR., Worcester, Mass.
Discussion to be opened by WILLIAM O'N. SHERMAN, Pittsburgh; CHARLES G. FARNUM, Peoria, Ill., and ARTHUR M. CORWIN, Chicago.

Industrial Medical Practice and Sickness Prevention as a Factor in Public Health.
C. E. FORD, New York.
Discussion to be opened by WILLIAM ALFRED SAWYER, Philadelphia.

The Enlarged Program of the U. S. Public Health Service, Division of Industrial Hygiene and Medicine.
JOSEPH W. SCHERESCHEWSKY, Washington, D. C.

International Aspect of Public Health as Related to Industrial Hygiene.
GEORGE A. SOPER, Sanitary Corps, U. S. Army.

Discussion of Papers 4, 5 and 6.
General Discussion of the Symposium.
Discussion to be opened by FRANCIS D. PATTERSON, Harrisburg, Pa.

Friday, June 13—2 p. m.

Meeting Place—Breakers, Egyptian Room

SYMPOSIUM—SOME FUTURE ASPECTS OF INDUSTRIAL MEDICINE AND SURGERY

Modernizing Our Medical College by Adding Departments of Industrial Medicine and Public Health.
OTTO P. GEIER, Cincinnati.
Discussion to be opened by DAVID L. EDSALL, Boston.

Medical Service for the Small Industrial Units.
CLARENCE D. SELBY, Toledo, Ohio.

SECTION ON PRACTICE OF MEDICINE

MEETS IN ST. PAUL'S CHURCH, AUDITORIUM—ALL MEETINGS

OFFICERS OF SECTION

Chairman—WALTER L. BIERRING, Des Moines, Iowa.
Vice Chairman—C. G. JENNINGS, Detroit.
Secretary—J. S. MCLESTER, Birmingham, Ala.
Acting Secretary—JOSEPH H. PRATT, Boston.
Executive Committee—ROGER S. MORRIS, Cincinnati; HENRY A. CHRISTIAN, Boston; LAWRENCE LITCHFIELD, Pittsburgh.
(Stenographer—DR. W. W. BELLAMY, Boston)

Wednesday, June 11—9 a. m.

Meeting Place—St. Paul's Church, Auditorium

1. Chairman's Address: Relations of Internists to Military Medicine. WALTER L. BIERRING, Des Moines, Iowa.
2. The Basal Metabolism and Alimentary Hyperglycemia Test of Thyrotoxicosis.
W. G. MCCASKEY, Fort Wayne, Ind.
Discussion to be opened by ALFRED C. CROFTON, Chicago, and JOHN E. GREIWE, Cincinnati.
3. The Value of the Basal Metabolic Rate in the Diagnosis of Hyperthyroidism.
HENRY S. PLUMMER, Rochester, Minn.
4. The Clinical, Functional and Pathologic Observations on Some Cases of Chronic Nephritis.
JAMES P. O'HARE, Boston.
Discussion to be opened by LEONARD G. ROWNTREE, Minneapolis.
5. Dietotherapy in Metabolic Disease.
FREDERICK M. ALLEN, New York.
6. A Note on the Recognition of Tropical Sprue in the United States. EDWARD J. WOOD, Wilmington, N. C.
Discutssion to be opened by DOUGLAS VANDERSHOOF, Richmond, and ANDREW W. SELLARDS, Boston.
7. Hypertension in Women with Remarks on Etiology, Prognosis and Treatment. DAVID RIESMAN, Philadelphia.

Thursday, June 12—9 a. m.

Meeting Place—St. Paul's Church, Auditorium

Election of Officers

8. The Clinical Study of Pulmonary Excursion.
CHARLES F. HOOVER, Cleveland.
9. Errors in the Diagnosis of Chronic Pulmonary Tuberculosis.
THOMAS MCCRAE and ELMER H. FUNK, Philadelphia.
10. Studies of Arthritis in the Army.
RALPH PEMBERTON, Philadelphia.
11. The Psychic Factor as an Element in Temperature Disturbance as Shown by Some Observations in the Selective Draft. FRANK B. WYNN, Indianapolis.
Discussion to be opened by CHARLES D. HUMES, Indianapolis.

12 The Importance of Physical Development in Cases of Effort Syndrome. BERTNARD SMITH, Los Angeles.
Discussion to be opened by EVELETH W. BRIDGEMAN, Baltimore, and FRANCIS W. PEABODY, Boston.

13. Pericarditis as a Complication of Pneumonia Based on Three Hundred and Fifty Necropsies. WILLARD J. STONE, Toledo, Ohio.

14. Effective and Practical Treatment of Malaria to Disinfect Infected Persons and Prevent Relapse. CHARLES C. BASS, New Orleans.

Friday, June 13—9 a. m.

Meeting Place—St. Paul's Church, Auditorium

SYMPOSIUM ON MILITARY MEDICINE

BY INVITATION, WILLIAM S. THAYER, BALTIMORE, WILL PRESIDE

15. Problems of the Division. MAURICE C. PINCOFFS, Chicago.

16. Problems of the Corps and Army. GEORGE DRAPER, New York.

17. Poisonous Gases: Immediate Recognition and Evacuation of Gas Cases. RICHARD DEXTER, Cleveland.

18. Poisonous Gases: Later Effects. ALFRED E. COHN, New York.

19. Poisonous Gases: Pathology. ALWIN M. PAPPENHEIMER, Hartsdale, N. Y.

20. Influenza. WARFIELD T. LONGCOPE, New York.

21. The Treatment of Chest Injuries. MARION A. BLANKENHORN, Orrville, Ohio.

22. Aviation. THOMAS R. BOGGS, Baltimore.

23. Nephritis in the Soldier. REGINALD FITZ, New York.

24. The Work of the Group Consultant. JOSEPH A. CAPPS, Chicago.

25. The Work of the Group Consultant JOSEPH SAILER, Philadelphia.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

MEETS IN FIRST PRESBYTERIAN CHURCH, AUDITORIUM—ALL MEETINGS

OFFICERS OF SECTION

Chairman—JOHN T. BOTTOMLEY, Boston.
Vice Chairman—LEGRAND GUERRY, Columbia, S. C.
Secretary—EUGENE H. POOLE, New York.
Acting Secretary—GEORGE P. MÜLLER, Philadelphia.
Executive Committee—E. WYLLYS ANDREWS, Chicago; WILLIAM D. HAGGARD, Nashville, Tenn.; E. STARR JUDD, Rochester, Minn.
(Stenographer—Mrs. M. C. REPP, Philadelphia)

Wednesday, June 11—2 p. m.

Meeting Place—First Presbyterian Church, Auditorium

1. Chairman's Address. JOHN T. BOTTOMLEY, Boston.

2. Traumatic or Wound Shock. WALTER B. CANNON, Boston.

3. Hemorrhage and Transfusion. BERTRAM M. BERNHEIM, Baltimore.
Discussion to be opened by GEORGE W. CRILE, Cleveland; OSWALD H. ROBERTSON, New York; HOWARD T. KARSNER, Cleveland; ELMER J. BISSELL, Rochester, N. Y., and MAJOR G. SEELIG, St. Louis.

4. "Débridement." DEAN D. LEWIS, Chicago.

5. Primary and Secondary Suture. EUGENE H. POOL, New York.
Discussion to be opened by HUGH CABOT, Boston; FRED W. BAILEY, St. Louis; WESLEY E. DRENNAN, Birmingham, Ala., and FREDERICK A. BESLEY, Chicago.

6. Gas Bacillus Infection. FREDERICK T. VAN BEUREN, JR., New York.

7. Sterilization of the Wound. GEORGE A. STEWART, Baltimore.
Discussion to be opened by A. DEPAGE, Belgium; JAMES P. HUTCHINSON, Philadelphia; ARTHUR W. ELTING, Albany, N. Y.; HENRY H. M. LYLE, New York; JAMES T. PILCHER, Brooklyn; FRED W. BANCROFT, New York, and HUGH H. TROUT, Roanoke, Va.

Thursday, June 12—9 a. m.

Meeting Place—First Presbyterian Church, Auditorium

Election of Officers

8. Opening Address. CHARLES H. MAYO, Rochester, Minn.

9. Brain Injuries. HARVEY CUSHING, Boston.
Discussion to be opened by PEDRO CHUTRO, Buenos Aires; KELLOGG SPEED, Chicago; HARRY H. KERR, Washington, D. C., and KARL W. NEY, New Orleans.

10. Peripheral Nerve Injuries.
CHARLES H. FRAZIER, Philadelphia, and SAMUEL SILBERT, New York.
Discussion to be opened by MARTIN B. TINKER, Ithaca, N. Y.; JAMES F. CORBETT, Minneapolis; MURRAY S. DANFORTH, Providence, R. I.; WILLIAM W. BABCOCK, Philadelphia; CHARLES BAGLEY, JR., Baltimore; ALFRED W. ADSON, Rochester, Minn., and BYRON P. STOOKEY, Los Angeles.

11. Abdominal Injuries. GEORGE W. CRILE, Cleveland.
Discussion to be opened by JOHN B. DEAVER, Philadelphia; JOHN H. GIBBON, Philadelphia; BURTON J. LEE, New York, and WILLIAM DARRACH, New York.

12. Chest Injuries. JOHN L. YATES, Milwaukee.
Discussion to be opened by ARTHUR M. SHIPLEY, Baltimore; WILLIAM F. VERDI, New Haven, Conn., and JOSEPH G. YOCUM, New York.

13. Maxillo-Facial Injuries. VILRAY P. BLAIR, St. Louis.
Discussion to be opened by GEORGE E. DESCHWEINITZ, Philadelphia; HARRIS P. MOSHER, Boston; ROBERT H. IVY, Milwaukee; WILLIAM T. COUGHLIN, St. Louis, and GEORGE M. DORRANCE, Philadelphia.

Friday, June 13—2 p. m.

Meeting Place—First Presbyterian Church, Auditorium

14. War Fractures. J. A. BLAKE, Paris

15. War Fractures. MAURICE HEITZ-BOYER, France.

16. War Fractures W. H. GROVES, England.

17. Statistical Summary of War Fractures. JOHN B. WALKER, New York.

18. Osteomyelitis After War Injury. PEDRO CHUTRO, Buenos Aires.

19. Restoration of Loss of Bone from Gunshot Wounds. FRED H. ALBEE, New York.
Discussion to be opened by FREDERICK A. BESLEY, Chicago; GEORGE W. HAWLEY, Bridgeport, Conn.; JOSEPH R. EASTMAN, Indianapolis; MORRIS K. SMITH, New York, and RALPH T. KNIGHT, Minneapolis.

20. War Injuries of Joints. VERNON C. DAVID, Chicago.
Discussion to be opened by ARTHUR M. SHIPLEY, Baltimore; BURTON J. LEE, New York, and KELLOGG SPEED, Chicago.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

MEETS, WEDNESDAY AND FRIDAY, IN FIRST PRESBYTERIAN CHURCH, AUDITORIUM; THURSDAY, IN FIRST PRESBYTERIAN CHURCH, CHAPEL

OFFICERS OF SECTION

Chairman—THOMAS J. WATKINS, Chicago.
Vice Chairman—T. W. KEEFE, Providence, R. I.
Secretary—SIDNEY A. CHALFANT, Pittsburgh.
Executive Committee—EDWARD REYNOLDS, Boston; HOWARD W. LONGYEAR, Detroit; BROOKE M. ANSPACH, Philadelphia.

Wednesday, June 11—9 a. m.

Meeting Place—First Presbyterian Church, Auditorium

1. Chairman's Address: Gynecology and Abdominal Surgery. THOMAS J. WATKINS, Chicago.

2. Analysis of Fifty Cases of Uterine Bleeding from Causes Other Than Malignancy or Myoma Treated by Radium. SAMUEL M. D. CLARK, New Orleans.

3. Treatment of Myoma Uteri with Radium. JOHN G. CLARK, Philadelphia.

4. Radium Treatment in Carcinoma of the Cervix and Body of the Uterus.
HOWARD A. KELLY and CURTIS F. BURNAM, Baltimore.
Discussion on papers 2, 3 and 4 to be opened by H. C. BAILEY, New York; ERNEST C. SAMUEL, New Orleans, and A. H. CURTIS, Chicago.

5. The End-Results in Over One Hundred Operations for Uterine Myoma (Operative Versus Roentgen-Ray Treatment). ARTHUR STEIN, New York.

6. The Teaching Function of the Hospital: With Especial Reference to Gynecology.
GEORGE GRAY WARD, JR., New York.
Discussion to be opened by BROOKE M. ANSPACH, Philadelphia.

7. Alternating, Periodical Swellings of the Ovary.
EMIL RIES, Chicago.

Thursday, June 12—9 a. m.

Meeting Place—First Presbyterian Church, Chapel

Election of Officers

8. Uterine Retrodisplacement as a Cause of Reflex Neuroses.
PETER B. SALATICH, New Orleans.
Discussion to be opened by EDWARD E. MONTGOMERY, Philadelphia.

9. A Clinical Study of the Treatment of Dysmenorrhea.
JENNINGS C. LITZENBERG, Minneapolis.

10. If Possible Prevent Sterilization in Young Women When Operating for Tubercular Peritonitis.
J. HENRY CARSTENS, Detroit.
Discussion to be opened by LEWIS S. MCMURTRY, Louisville.

11. The Specialty of Obstetrics.
HENRY P. NEWMAN, San Diego.
Discussion opened by EDWARD P. DAVIS, Philadelphia.

12. The Newer Methods of Cesarean Section: Their Indications: Results in Forty Cases (Lantern Demonstration.) JOSEPH B. DELEE, Chicago.
Discussion to be opened by JAMES W. MARKOE, New York, and CHARLES E. PADDOCK, Chicago.

13. Etiology and Treatment of Pernicious Nausea and Vomiting of Pregnancy. FRANK W. LYNCH, San Francisco.
Discussion to be opened by ALFRED BAKER SPALDING, San Francisco.

14. The Treatment of Abdominal Pregnancy After the Fifth Month (Lantern Demonstration).
ALFRED C. BECK, Brooklyn.
Discussion to be opened by JOHN O. POLAK, Brooklyn.

15. Aspiration and Pressure Treatment of Unopened Mammary Abscesses (Puerperal).
JOHN GARDINER, Toledo.
Discussion to be opened by RICHARD C. NORRIS, Philadelphia.

Friday, June 13—9 a. m.

Meeting Place—First Presbyterian Church, Auditorium

16. Trendelenburg Ether Anesthesia in Pelvic Surgery (Lantern Demonstration). DONALD GUTHRIE, Sayre, Pa.
Discussion to be opened by RALEIGH R. HUGGINS, Pittsburgh.

17. Abdominal Surgery Under Local Anesthesia (Lantern Demonstration). ROBERT E. FARR, Minneapolis.

18. The Treatment of Gunshot Wounds of the Abdomen.
JOHN H. GIBBON, Philadelphia.
Discussion to be opened by EDWARD W. MEREDITH, Pittsburgh.

19. The Efficiency of Surgical Treatment in the Bleeding Type of Gastric and Duodenal Ulcer.
DONALD C. BALFOUR, Rochester, Minn.

20. A New Operation for Duodenal and Gastric Ulcers (Lantern Demonstration).
J. SHELTON HORSLEY, Richmond, Va.
Discussion to be opened by ALBERT E. HALSTEAD, Chicago, and GEORGE W. CRILE, Cleveland.

21. Rational Surgery of Visceroptosis (Lantern Demonstration). ROLAND HAZEN, Paris, Ill.
Discussion by ROBERT T. MORRIS, New York.

22. The Better Methods of Wound Treatment.
HENRY O. MARCY, Boston.
Discussion to be opened by FREDERICK A. BESLEY, Chicago.

SECTION ON OPHTHALMOLOGY

MEETS IN TRAYMORE, ROSE ROOM—ALL MEETINGS

OFFICERS OF SECTION

Chairman—CASSIUS D. WESCOTT, Chicago.
Vice Chairman—THOMAS B. HOLLOWAY, Philadelphia.
Secretary—ALBERT E. BULSON, JR., Fort Wayne, Ind.
Executive Committee—WALTER R. PARKER, Detroit; WILLIAM ZENTMAYER, Philadelphia; ALEXANDER DUANE, New York.
(Stenographer—JAMES C. MARRIOTT, New York)

Wednesday, June 11—9 a. m.

Meeting Place—Traymore, Rose Room

1. Chairman's Address. Cassius D. WESCOTT, Chicago.

SYMPOSIUM ON REFRACTION

2. Ophthalmologist and Physician.
CHARLES P. EMERSON, Indianapolis.

3. Necessary but Often Neglected Refinements in the Examination of Ocular Refraction.
WALTER L. PYLE, Philadelphia.

4. The Present Status of Refraction Work.
EDWIN J. GARDINER, Chicago.

5. The Correction of the Muscular Anomalies of the Eye of Only Less Importance Than That of Their Faults of Refraction. SAMUEL THEOBALD, Baltimore.
Discussion of the Symposium to be opened by EDWARD JACKSON, Denver; ALBERT E. BULSON, JR., Fort Wayne, Ind.; THOMAS B. HOLLOWAY, Philadelphia, and ISAAC HARTSHORN, New York.

EXHIBITION OF NEW INSTRUMENTS AND APPLIANCES

Wednesday, June 11—2 p. m.

Meeting Place—Traymore, Rose Room

6. The Organization and Activities of the Ophthalmic Service in the American Expeditionary Forces.
ALLEN GREENWOOD, Boston.
Discussion to be opened by JAMES BORDLEY, JR., Baltimore.

7. The Control of Trachoma Among the Alien Labor Companies of the British and American Expeditionary Forces. GEORGE S. DERBY, Boston.
Discussion to be opened by ALLEN GREENWOOD, Boston.

8. Group Study, a Necessity in Ophthalmic Research.
F. PARK LEWIS, Buffalo.
Discussion to be opened by WALTER R. PARKER, Detroit.

9. Daylight Illumination of Interiors.
EDWARD JACKSON, Denver.
Discussion to be opened by NELSON M. BLACK, Milwaukee.

10. Family Degeneration of the Macula Lutea.
ROBERT BLUE, Chicago.
Discussion to be opened by WILLIAM ZENTMAYER, Philadelphia.

Thursday, June 12—9 a. m.

Meeting Place—Traymore, Rose Room

Election of Officers

Reports of Committees

11. The Action of Radium on Cataracts.
MARTIN COHEN and ISAAC LEVIN, New York.
Discussion to be opened by E. V. L. BROWN, Chicago.

12. Immediate Capsulotomy in the Extraction of Senile Cataract. ARTHUR G. BENNETT, Buffalo.
Discussion to be opened by HARRY W. WOODRUFF, Joliet.

13. Adventitious Hyaloid Membrane Following Operation for Secondary Cataract.
S. LEWIS ZIEGLER, Philadelphia.
Discussion to be opened by ALEXANDER DUANE, New York.

14. The Autotoxic Factor in Sympathetic Ophthalmia.
ARNOLD KNAPP, New York.
Discussion to be opened by HAROLD GIFFORD, Omaha.

15. Treatment of Symblepharon and Restoration of the Orbital Socket. WILLIAM H. WILDER, Chicago.
Discussion to be opened by JOHN E. WEEKS, New York.

16. The Rôle of Teeth, Tonsils, and Toxemias of the Intestinal Tract in Relation to Diseases of the Eye.
GEORGE HUSTON BELL, New York.
Discussion to be opened by HIRAM WOODS, Baltimore.

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Friday, June 13—9 a. m.

Meeting Place—Traymore, Rose Room

17. A New Operation for the Relief of Conical Cornea.
L. WEBSTER FOX, Philadelphia.
Discussion to be opened by WALTER B. LANCASTER, Boston.
18. Uveitis. A. EDWARD DAVIS, New York.
Discussion to be opened by GEORGE E. DE SCHWEINITZ, Philadelphia.
19. (1) Cysticercus of the Vitreous; (2) Congenital Multilocular Cysts in Relation with the Retina, and (3) Anterior Lenticonus, Being a Clinical Communication. GEORGE E. DE SCHWEINITZ, Philadelphia, and MEYER WIENER, St. Louis.
Discussion to be opened by FREDERICK H. VERHOEFF, Boston.
20. Foreign Bodies Within the Eyeball.
JOHN O. MCREYNOLDS, Dallas, Texas.
Discussion to be opened by WILLIAM M. SWEET, Philadelphia.
21. The Treatment of Dacriocystitis by Curettage.
JOHN GREEN, JR., St. Louis.
Discussion to be opened by WILLIAM R. THOMPSON, Fort Worth, Texas.
22. Personal Observations Regarding the Treatment of Glaucoma. JOHN E. WEEKS, New York.
Discussion to be opened by WILLIAM CAMPBELL POSEY, Philadelphia.

SECTION ON LARYNGOLOGY, OTOLOGY, AND RHINOLOGY

MEETS IN TRAYMORE, BELVIDERE—ALL MEETINGS

OFFICERS OF SECTION

Chairman—LEE WALLACE DEAN, Iowa City, Iowa.
Vice Chairman—EUGENE R. LEWIS, Dubuque, Iowa.
Secretary—WILLIAM B. CHAMBERLIN, Cleveland.
Executive Committee—HILL HASTINGS, Los Angeles; FRANCIS P. EMERSON, Boston; GREENFIELD SLUDER, St. Louis.
(Stenographer—MISS F. E. DILLON, Indianapolis)

Wednesday, June 11—9 a. m.

Meeting Place—Traymore, Belvidere

1. Chairman's Address.
LEE WALLACE DEAN, Iowa City, Iowa.
2. Physiologic Mechanism of Sneezing and Nasal Hydrorrhea. ALBERT P. BRUBAKER, Philadelphia.
Discussion to be opened by WOLF FREUDENTHAL, New York.
3. Nasal Hydrorrhea. JOHN A. THOMPSON, Cincinnati.
Discussion to be opened by H. HOLBROOK CURTIS, New York.
4. Asthma as a Nasal Reflex.
GREENFIELD SLUDER, St. Louis.
Discussion to be opened by EMIL MAYER, New York, and ORVILLE H. BROWN, Phoenix, Ariz.
5. Results Obtained in the Treatment of Hay-Fever (Pollen Disease) by Pollen Extracts.
KARL K. KOESSLER, Chicago.
Discussion to be opened by GEORGE E. SHAMBAUGH, Chicago.
6. Sphenopalatine Ganglion Neurosis.
HARRY L. POLLOCK, Chicago.
Discussion to be opened by WILLIAM MITHOEFER, Cincinnati.
7. The Accessory Sinuses in Children.
SEYMOUR OPPENHEIMER, New York.
Discussion to be opened by CHARLES GILMORE KERLEY, New York.

Thursday, June 12—9 a. m.

Meeting Place—Traymore, Belvidere

Election of Officers

EXHIBITION OF NEW INSTRUMENTS AND APPLIANCES

Report of Committees

8. Arachidic Bronchitis. CHEVALIER JACKSON, Philadelphia.
Discussion to be opened by EDWIN E. GRAHAM, Philadelphia.
9. Influenza Croup, Diagnosed by Direct Examination of the Larynx. HENRY L. LYNAH, New York.
Discussion to be opened by HUBERT ARROWSMITH, Brooklyn.
10. Relation of the Ear and Accessory Sinuses to Influenza During the Recent Epidemic, as Observed at the Walter Reed General Hospital, Takoma Park, D. C. JOSEPH H. BRYAN, Washington, D. C., and C. NORMAN HOWARD, Warsaw, Ind.
Discussion to be opened by GEORGE FETTEROLF, Philadelphia, and H. J. NICHOLS, Washington, D. C.
11. The Surgery of the Facial Nerve for Chronic Peripheral Facial Paralysis. WILLIAM SHARPE, New York.
Discussion to be opened by PHILIP D. KERRISON, New York, B. ALEXANDER RANDALL and S. MACCUEN SMITH, Philadelphia.
12. Reconstruction of the Defects in Hearing and Speech, As Carried Out by the Division of Physical Reconstruction, Surgeon-Genera's Office.
CHARLES W. RICHARDSON, Washington, D. C.
Discussion to be opened by JOHN M. INGERSOLL, Cleveland.
13. Some Observations on the Present Status of Oto-Laryngology in America. THOMAS J. HARRIS, New York.
Discussion to be opened by HARRIS P. MOSHER, Boston, and JAMES F. MCKERNON, New York.
14. Abscess of the Brain: Its Surgical Treatment.
WELLS P. EAGLETON, Newark, N. J.
Discussion to be opened by JOHN W. MURPHY, Cincinnati, and GEORGE F. COTT, Buffalo.

Friday, June 13—9 a. m.

Meeting Place—Traymore, Belvidere

15. Mastoidectomy: Postoperative Treatment by Carrel-Dakin Solution and Results. JOHN B. POTTS, Omaha.
Discussion to be opened by EWING W. DAY, Pittsburgh, and ARTHUR C. STOKES, Omaha.
16. Some Experiences of a Commanding Officer of a Base Hospital in France.
ROSS HALL SKILLERN, Philadelphia.
Discussion to be opened by GEORGE M. COATES, Philadelphia.
17. Tranquil Tracheotomy by Injecting Cocain Within the Windpipe.
SIR ST. CLAIR THOMPSON (Guest of Honor), London, England.
General Discussion.
18. Film: Fit to Fly.
Air Service, Medical Corps, U. S. Army.

SECTION ON DISEASES OF CHILDREN

MEETS IN ST. PAUL'S CHURCH, CHAPEL—ALL MEETINGS

OFFICERS OF SECTION

Chairman—FRANK P. GENGENBACH, Denver.
Vice Chairman—JAY I. DURAND, Seattle.
Secretary—E. C. FLEISCHNER, San Francisco.
Executive Committee—T. C. MCCLEAVE, Oakland, Calif; J. P. SEDGWICK, Minneapolis; LAURENCE R. DEBUYS, New Orleans.
(Stenographer—MR. WILLARD BOTTOME, New York)

Wednesday, June 11—2 p. m.

Meeting Place—St. Paul's Church, Chapel

1. Chairman's Address: Our Section in War Work.
FRANKLIN P. GENGENBACH, Denver.
2. Report of the Advisory War Committee of the Children's Section. JULIUS P. SEDGWICK, Minneapolis.
3. Results of Children's Year.
ANNA E. RUDE, Washington, D. C.
4. The Work of the Pediatrist at Home.
FRANK C. NEFF, Kansas City, Mo.
5. The Work of the Children's Bureau of the American Red Cross in Lyons, France.
CLIFFORD G. GRULEE, Chicago.
6. The Artificial Feeding of Athreptic Infants.
W. MCKIM MARRIOTT, St. Louis.
7. The Deleterious Effect of Alkalinization of Infants' Food. ALFRED F. HESS, New York.

Thursday, June 12—9 a. m.

Meeting Place—St. Paul's Church, Chapel

Election of Officers

8. Hemangio-Endotheliosarcoma of the Liver: A Disease of Early Life. JOHN A. FOOTE, Washington, D. C.
9. Observations on the Spinal Fluid of Acute Disease. WILLIAM W. HERRICK, New York, and ARTHUR M. DANNENBERG, Philadelphia.
10. Quantitative and Qualitative Changes in Cerebrospinal Fluid and Their Significance. ABRAHAM LEVINSON, Chicago.
11. Pneumonia in Infancy and Childhood Without Physical Signs. ROWLAND G. FREEMAN, New York.
12. A Comparative Study of the Early and Late Secondary Complications of Influenzal Pneumonia in the Army and Those of Civil Pediatric Practice JULIUS H. HESS, Chicago.
13. Abscess of the Lung in Children. HARRY WESSLER and HERMAN SCHWARTZ, New York.
14. Some Practical Experiences in the Treatment of Children with Tuberculosis. R. COLE NEWTON, Montclair.

Friday, June 13—2 p. m.

Meeting Place—St. Paul's Church, Chapel

15. New Methods in Outpatient Work. CHARLES HENDEE SMITH, New York.
16. The Analysis of Human Milk: The Technic of Obtaining Samples and the Interpretation of Results. FRITZ B. TALBOT, Boston.
17. Retrospect of Fifteen Years' Experience in the Treatment of Hypertrophic Pyloric Obstruction in Infants. LANGLEY PORTER, San Francisco.
18. Chemical Examination of the Blood of Children. HENRY D. CHAPIN, New York.
19. The Abuse of Cathartics and Laxatives in Infancy and Childhood. LOUIS FISCHER, New York.
20. The Nervous Child and His Management. EDWIN B. MCCREADY, Pittsburgh.
21. A Study in a Foundling Institution to Determine the Existence of Congenital Lues. LAURENCE R. DEBUYS, New Orleans.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

MEETS, WEDNESDAY AND THURSDAY, IN ST. PAUL'S CHURCH, LECTURE ROOM; FRIDAY, IN ST. PAUL'S CHURCH, AUDITORIUM

OFFICERS OF SECTION

Chairman—W. A. BASTEDO, New York.
Vice Chairman—G. W. MCCOY, Washington, D. C.
Secretary—CARY EGGLESTON, New York.
Executive Committee—J. F. ANDERSON, New Brunswick, N. J.; R. A. HATCHER, New York; ALBION W. HEWLETT, San Francisco; ARTHUR D. HIRSCHFELDER, Minneapolis.
(Stenographer—Mr. REXFORD L. HOLMES, Washington, D. C.)

Wednesday, June 11—2 p. m.

Meeting Place—St. Paul's Church, Lecture Room

1. Chairman's Address: Suggestions for an Ideal Course in Therapeutics. WALTER A. BASTEDO, New York.
2. Therapeutic Aspect of Blood Transfusion. LESTER J. UNGER, New York.
3. Critical Period in Various Diseases Treated by Blood Transfusion. EDWARD LINDEMAN, New York.
4. The Action of Anthracene Cathartics on the Isolated Uterus. CHARLES C. LIEB, New York.
5. Therapeutic Observations in Bacillary Dysentery. P. NOLF, Brussels, Belgium. (By Invitation).
6. The Therapeutic Use of Active Deposit of Radium. HENRY H. JANEWAY, New York.
7. A Study of Acute Bichlorid Intoxication in Normal and in Naturally Nephropathic Dogs. WILLIAM DEB. MACNIDER, Chapel Hill, N. C.

Thursday, June 12—9 a. m.

Meeting Place—St. Paul's Church, Lecture Room

Election of Officers

8. Forty Years' Observation Among Beer, Wine and Whisky Drinkers. LAMBERT OTT, Philadelphia.
9. Chronic Alcoholism: Dangers of Immediate Withdrawal. GEORGE E. PETTEY, Memphis, Tenn.
10. A Contribution to the Pharmacology of the Local Anesthetics. CARY EGGLESTON and ROBERT A. HATCHER, New York.
11. The Principles of the Treatment of Asthma. ORVILLE HARRY BROWN, Phoenix, Ariz.
12. Allergy in Drug Idiosyncrasy. ROBERT A. COOK, New York.
13. Results in the Modern Treatment of Diabetes. HENRY RAWLE GEYELIN, New York.
14. A Therapeutic Study of Benzyl Benboate: Pharmacologic and Clinical. DAVID I. MACHT, Baltimore.

Friday, June 13—2 p. m.

Meeting Place—St. Paul's Church, Auditorium

JOINT MEETING OF SECTIONS ON PREVENTIVE MEDICINE AND PUBLIC HEALTH; PHARMACOLOGY AND THERAPEUTICS AND PATHOLOGY AND PHYSIOLOGY

SYMPOSIUM ON INFLUENZA

15. Experiments on Volunteers to Determine the Mode of Spread of Influenza. MILTON J. ROSENAU, Boston.
16. Epidemiology of Influenza. WADE H. FROST, Washington, D. C.
17. The Bacteriology of Influenza and Its Complications. WILLIAM H. PARK, New York.
18. The Pathology of Influenza. WILLIAM G. MACCALLUM, Baltimore.
19. The Symptoms and Complications of Influenza. LEWIS A. CONNER, New York.
20. Further Studies on Prophylactic Inoculation in Influenza and Pneumonia. EDWARD C. ROSENOW, Rochester, Minn.
21. Present Status of Prophylactic Vaccination Against Influenza. GEORGE W. MCCOY, Washington, D. C.
22. Value of Convalescent Blood and Serum in the Treatment of Influenzal Pneumonia. HENRY F. STOLL, Hartford, Conn.
23. The Treatment of Influenza by Means Other Than Vaccine and Serums. JAMES B. HERRICK, Chicago.

SECTION ON PATHOLOGY AND PHYSIOLOGY

MEETS, WEDNESDAY AND THURSDAY, IN ROYAL PALACE, HALL A; FRIDAY, IN ST. PAUL'S CHURCH, AUDITORIUM

OFFICERS OF SECTION

Chairman—FRANCIS CARTER WOOD, New York.
Vice Chairman—ISABELLA C. HERB, Chicago.
Secretary—JOSIAH J. MOORE, Chicago.
Executive Committee—F. P. GAY, Berkeley, Calif.; JAMES EWING, New York; LOUIS B. WILSON, Rochester, Minn.
(Stenographer—Mr. GEORGE B. COCK, Philadelphia)

Wednesday, June 11—2 p. m.

Meeting Place—Royal Palace, Hall A

1. Chairman's Address: The Relation of Pathology to Practice. FRANCIS CARTER WOOD, New York.
2. The Human Machine in the Factory. FREDERIC LEE, New York.
3. Clinical Types of Occupational Diseases and the Study of Methods for their Prevention. LOUIS I. HARRIS, New York.
4. A Newly Recognized Cause of Pulmonary Disease—*Ascaris lumbricoides*. B. H. RANSOM, Washington, D. C.
5. The Periodicity of Microfilaria. KENNETH M. LYNCH, Charleston, S. C.
6. Experimental Emphysema. SARAH R. KELMAN, Iowa City, Iowa.

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Thursday, June 12—9 a. m.

Meeting Place—Royal Palace, Hall A

Election of Officers

7. Mustard Gas.
ELI K. MARSHALL, JR., Washington, D. C.

8. Mustard Gas: Its Penetration and Mode of Function in the Tissues. G. H. A. CLOWES, Indianapolis.

9. The Physiology and Experimental Treatment of Acute Poisoning with the Lethal War Gases.
FRANK P. UNDERHILL, New Haven, Conn.

10. Anatomic Changes in the Respiratory Tract Initiated by Irritating Gases.
MILTON C. WINTERNITZ, New Haven, Conn.

11. Duodenectomy: A Preliminary Report.
FRANK C. MANN and K. KAWAMURA, Rochester, Minn.

12. Clinical Diagnosis as Compared with Necropsy Findings in Six Hundred Cases.
HOWARD T. KARSNER, L. ROTHSCHILD and E. C. CRUMP, Cleveland.

Friday, June 13—2 p. m.

Meeting Place—St. Paul's Church, Auditorium

JOINT MEETING WITH THE SECTIONS ON PHARMACOLOGY AND THERAPEUTICS, AND PREVENTIVE MEDICINE AND PUBLIC HEALTH

SYMPOSIUM ON INFLUENZA

For program see page 1418

SECTION ON STOMATOLOGY

MEETS IN ROYAL PALACE, HALL B—ALL MEETINGS

OFFICERS OF SECTION

Chairman—E. S. TALBOT, Chicago.
Vice Chairman—CHALMERS J. LYONS, Ann Arbor, Mich.
Secretary—ARTHUR D. BLACK, Chicago.
Executive Committee—FREDERICK B. MOOREHEAD, Chicago; ARTHUR D. BLACK, Chicago; FREDERICK B. NOYES, Chicago.
(Stenographer—Mr. WILLIAM F. SMART, New York)

Wednesday, June 11—9 a. m.

Meeting Place—Royal Palace, Hall B

1. Chairman's Address. EUGENE S. TALBOT, Chicago.
2. Macrocheilia, with Report of Two Cases. (Lantern Demonstration). F. B. MOOREHEAD, Chicago.
3. Teaching the Principles of Maxillofacial Surgery in a Civilian School. CHARLES R. TURNER, Philadelphia.
4. Teaching the Principles of Maxillofacial Surgery in a Military School. G. V. I. BROWN, Milwaukee.
5. Experience of a Dental Surgeon in an Evacuation Hospital. RAE P. MCGEE, Denver.
6. Experience of a Dental Surgeon in a Base Hospital in the Advanced Area. IVAN SMITH, Mishawaka, Ind.

Thursday, June 12—9 a. m.

Meeting Place—Royal Palace, Hall B

Election of Officers

7. Experience of a Dental Surgeon in a Base Hospital in a Base Section. STEWART RUGGLES, Portsmouth, Ohio.
8. Experience of an Area Consultant in the Zone of the Advance. GEORGE W. SCHAEFFER, Columbus, Ohio.
9. Experience of an Area Consultant in a Base Section.
JUSTIN M. WAUGH, Hood River, Ore.
10. Experience of an Area Consultant in the Intermediate Section. HERBERT A. POTTS, Chicago.
11. Observations on the Work at Queens Hospital in England.
GEORGE M. DORRANCE, Philadelphia.
12. Reconstruction Work in War Injuries of the Jaws (Lantern Demonstration).
ROBERT H. IVY, Milwaukee, and JOSEPH D. EBY, Washington, D. C.

Friday, June 13—9 a. m.

Meeting Place—Royal Palace, Hall B

13. Bone Grafting in Jaw Cases.
FRANK J. TAINTER, St. Charles, Mo.
14. Infected Fractures of the Mandible.
DANIEL H. MACAULY, JR., and ERNEST P. DAMERON, Cape May, N. J.
15. Osteoperiosteal Bone Grafts of the Mandible as Performed by the French; A Report of Two Recent Cases.
HENRY S. DUNNING, New York.
16. Prosthetic Appliances in Relation to the Surgical Treatment of Wounds of the Face and Jaws.
V. H. KAZANJIAN, Boston.
17. Jaw Service at the American Red Cross Hospital No. 1, Paris. WILLIAM COUGHLIN, St. Louis.
General discussion of Oral Surgery Service in the War will be opened by VILRAY P. BLAIR, St. Louis.

SECTION ON NERVOUS AND MENTAL DISEASES

MEETS IN BRIGHTON CASINO—ALL MEETINGS

OFFICERS OF SECTION

Chairman—ARCHIBALD CHURCH, Chicago.
Vice Chairman—E. E. SOUTHARD, Boston.
Secretary—CHARLES W. HITCHCOCK, Detroit.
Executive Committee—FRANCIS X. DERCUM, Philadelphia; BERNARD SACHS, New York; C. EUGENE RIGGS, St. Paul.
(Stenographer—Miss EDITH PHELPS, New York)

Wednesday, June 11—2 p. m.

Meeting Place—Brighton, Casino

1. Chairman's Address: The Pathology of Cervical Ribs.
ARCHIBALD CHURCH, Chicago.
2. The Mechanism of Referred Pain, Hyperalgesia and Alcoholic Injections for the Relief of Neuralgia with Suggestions for the Surgical Treatment of Injured Nerves. JOSEPH BYRNE, New York.
Discussion to be opened by ALFRED S. TAYLOR and ISRAEL STRAUSS, New York.
3. Some Fundamental Traits of the So-Called Neurotic.
MEYER SOLOMON, Chicago.
4. A New Polyglandular Compensatory Syndrome.
WALTER TIMME, New York.
5. Treatment of War Neurosis.
THEODORE H. WEISENBURG, Philadelphia.
6. The Psychopathology of Amnesia.
EDWARD E. MAYER, Pittsburgh.
7. The Management of War Hysteria.
TOM A. WILLIAMS, Washington, D. C.

Thursday, June 12—9 a. m.

Meeting Place—Brighton, Casino

Election of Officers

8. Neurologic and Psychiatric Experiences Illustrative of Real Progress and of Fads and Fallacies in Therapeutics. CHARLES K. MILLS, Philadelphia.
9. The Range of the General Practitioner in Psychiatry.
ELMER E. SOUTHARD, Boston.
10. Congenital Tumor (Telangiectasis) and Associated Cerebral Movements.
WILLIAM G. SPILLER, Philadelphia.
11. Original Test for the Pathologic Great Toe Sign with Illustrative Cases. LEO M. CRAFTS, Minneapolis.
12. Clinical Report of a Case of Tumor of the Pons Varolii (Lantern Demonstration).
TOM B. THROCKMORTON, Des Moines, Iowa.
13. The Histologic Changes in the Brain in Lethargic Encephalitis (Lantern Demonstration).
PETER BASSOE and GEORGE B. HASSIN, Chicago.
14. The Rôle of the Pituitary Gland in Epilepsy.
BEVERLY TUCKER, Richmond, Va.
Discussion to be opened by WALTER TIMME, New York, and LEWELLYS F. BARKER, Baltimore.

Friday, June 13—2 p. m.

Meeting Place—Brighton, Casino

15. Lethargic Encephalitis. ANDREW C. GILLIS, Baltimore.
16. A Case of Hysterical Hemiplegia, Following a Shrapnel Wound of Scalp, and Presenting Interesting Clinical Features. HARRY H. DRYSDALE, Cleveland.

17. The Therapy of Neurosyphilis, Judged by Arsenic Penetration of the Meninges.
HENRY G. MEHRTENS, San Francisco.
18. Multiple Neuritis of Toxi-Infectious Origin with Especial Reference to Diabetic Polyneuritis.
ALFRED GORDON, Philadelphia.
19. The Resemblance of the Sensory Symptoms of Diphtheritic Multiple Neuritis to Those of Anemic Cord Changes. GEORGE WILSON, Philadelphia.
20. Nervous System Sequelae in Three-Day Fever.
WILLIAM H. ROBEY, JR., Boston.

SECTION ON DERMATOLOGY

MEETS, WEDNESDAY AND FRIDAY, IN TRAYMORE, BELVIDERE; THURSDAY, IN SEASIDE

OFFICERS OF SECTION

Chairman—OTTO H. FOERSTER, Milwaukee.
Vice Chairman—DAVID LIEBERTHAL, Chicago.
Secretary—WALTER J. HIGHMAN, New York.
Executive Committee—HOWARD MORROW, San Francisco; HENRY R. VARNEY, Detroit; HENRY H. HAZEN, Washington, D. C.
(Stenographer—Mrs. IRENE HILTON SNYDER, Chicago)

Wednesday, June 11—2 p. m.

Meeting Place—Traymore, Belvidere

1. Chairman's Address: Dermatology and Associated Disorders of the Mucous Membranes.
OTTO H. FOERSTER, Milwaukee.

SYMPOSIUM ON DERMATOLOGY AND SYPHILOLOGY DURING THE WAR

2. Dermatology and Syphilology in a Medical Advisory Board. HENRY H. HAZEN, Washington, D. C.
3. Dermatology and Syphilology in the Army.
WARREN WALKER, Philadelphia.
4. Experiences with Scabies at a Debarkation Port.
C. GUY LANE, Woburn, Mass.
5. Responsibilities in the Treatment of Syphilis.
HARRY G. IRVINE, Minneapolis.
6. A State Campaign Against Venereal Diseases.
HAROLD N. COLE, Cleveland.

Thursday, June 12—9 a. m.

Meeting Place—Seaside

Election of Officers

SYMPOSIUM ON SYPHILOLOGY

7. Further Work with Arsphenamin.
JAY F. SCHAMBERG, JOHN A. KOLMER and G. W. RAIZISS, Philadelphia.
8. Vitiligo and Syphilis.
JOHN E. LANE, New Haven, Conn.
9. Observations on the Treatment of Syphilis.
WILLIAM H. GUY, Pittsburgh.
10. Syphilitic Epididymitis.
HENRY E. MICHELSON, Minneapolis.
11. Two Years of Radium.
HOWARD MORROW, San Francisco.
12. Roentgen-Ray Treatment of Widespread and Generalized Skin Diseases. FRED WISE, New York.
13. Treatment of Nevus Vasculosis and Other Skin Defects by the Electrodesiccation Method, Ultraviolet Rays, Radium and Electrolysis.
WILLIAM L. CLARK, Philadelphia.

Friday, June 13—2 p. m.

Meeting Place—Traymore, Belvidere

14. Ragweed Dermatitis.
RICHARD L. SUTTON, Kansas City, Mo.
15. Importance of Normal Amount of Oil in the Skin.
HENRY R. VARNEY, Detroit.
16. The *Moulage* as a Record Employed at the Army Medical Museum. J. FRANK WALLIS, Pleasantville, N. J.
17. Blood Sugar Findings in Diseases of the Skin.
ISAAC R. PELS, Baltimore.
18. The Etiology of Common Warts.
UDO J. WILE and LYLE KINGERY, Ann Arbor, Mich.
19. Dermatothlasia. GEORGE M. MACKEE, New York.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

MEETS, WEDNESDAY AND THURSDAY, IN BREAKERS, EGYPTIAN ROOM; FRIDAY IN ST. PAUL'S CHURCH, AUDITORIUM

OFFICERS OF SECTION

Chairman—C. ST. CLAIR DRAKE, Springfield, Ill.
Vice Chairman—J. W. SCHERESCHEWSKY, Washington, D. C.
Secretary—DON B. LOWE, Akron, Ohio.
Executive Committee—WILLIAM C. RUCKER, Washington, D. C.; OTTO P. GEIER, Cincinnati; W. S. RANKIN, Raleigh, N. C.
(Stenographer—Mr. SAMUEL BRUCKHEIMER, New York)

Wednesday, June 11—9 a. m.

Meeting Place—Breakers, Egyptian Room

1. The Influence of the War on Preventive Medicine and Public Health. C. ST. CLAIR DRAKE, Springfield, Ill.
2. Public Health Problems of the Southern Countries.
JUAN GUITERAS, Havana, Cuba.
3. The Ohio Plan of County Health Control.
ALLEN W. FREEMAN, Columbus, Ohio.
4. What New Jersey Has Done in Mosquito Extermination.
WILLIAM E. DARNALL, Atlantic City, N. J.
5. Recent and Pending National Legislation Affecting Public Health Control.
LESLIE L. LUMSDEN, Washington, D. C.
6. The Demand During the Reconstruction Period for a Community Nursing Service.
BERTIS R. WAKEMAN, Hornell, N. Y.

Thursday, June 12—9 a. m.

Meeting Place—Breakers, Egyptian Room

Election of Officers

7. General Health Activities and Their Influence on Tuberculosis Mortality.
GEORGE THOMAS PALMER, Springfield, Ill.
8. The Aftermath of Influenza.
FRANKLIN C. GRAM, Buffalo.
9. Some Practical Statistics of Influenza Morbidity and Mortality. FREDERICK L. HOFFMAN, Newark, N. J.
10. Progress of Venereal Disease Control.
C. C. PIERCE, Washington, D. C.
11. Encephalitis Lethargica. JOSEPHINE B. NEAL, New York.
12. Open Air Classes. LEOPOLD MARCUS, New York.

Friday, June 13—2 p. m.

Meeting Place—St. Paul's Church, Auditorium

JOINT MEETING OF SECTIONS ON PREVENTIVE MEDICINE AND PUBLIC HEALTH; PHARMACOLOGY AND THERAPEUTICS, AND PATHOLOGY AND PHYSIOLOGY

SYMPOSIUM ON INFLUENZA

For program see page 1418

SECTION ON GENITO-URINARY DISEASES

MEETS, WEDNESDAY AND FRIDAY, IN BRIGHTON, CASINO; THURSDAY, IN ALAMAC

OFFICERS OF SECTION

Chairman, W. F. BRAASCH, Rochester, Minn.
Vice Chairman, R. L. RIGDON, San Francisco.
Secretary—E. O. SMITH, Cincinnati.
Executive Committee—LOUIS E. SCHMIDT, Chicago; HUGH CABOT, Boston; EDWARD L. KEYES, JR., New York.
(Stenographer—Mr. GEORGE D. ZIEGLER, New Brunswick, N. J.)

Wednesday, June 11—9 a. m.

Meeting Place—Brighton, Casino

1. The Colliculus Seminalis at Birth: With a Report of the Origin, Development, and Zonal Distribution of Its Gland Tubules. ERNEST M. WATSON, Buffalo.
Discussion to be opened by ANTON G. RYTINA, Baltimore.
2. Recent Considerations Concerning the Seminal Vesicles with Special References to Differential Diagnosis and Treatment. EDWARD W. WHITE, Chicago.
Discussion to be opened by LOUIS E. SCHMIDT, Chicago.
3. Further Observations On the Use of Indigo-Carmin as a Test of Renal Function.
H. DAWSON FURNISS, New York.
Discussion to be opened by BENJAMIN A. THOMAS, Philadelphia, and LEO BUERGER, New York.

4. Relief of Essential Hematuria by Intrapelvic Injections of Silver Nitrate. ANTON G. RYTINA, Baltimore.
Discussion to be opened by HERMAN L. KRETSCHMER, Chicago.

5. Urethral Strictures: Their Nonoperative Treatment for the General Practitioner.
WIRT B. DAKIN, Los Angeles.
Discussion to be opened by WILLIAM N. WISHARD, Indianapolis.

6. Malakoplakia of the Bladder: Reports of Two Cases.
ALFRED I. FOLSOM, Dallas, Texas.
Discussion to be opened by ARTHUR L. CHUTE, Boston.

7. Etiology of Vesical Diverticulum.
FRANK HINMAN, San Francisco.
Discussion to be opened by CHARLES M. MCKENNA, Chicago.

8. Contracture of the Neck of the Bladder: Its Pathology and Operative Treatment. LEO BUERGER, New York.
Discussion to be opened by HUGH H. YOUNG, Baltimore, and WILLIAM C. QUINBY, Boston.

Thursday, June 12—9 a. m.

Election of Officers

Meeting Place—Alamac

9. Chairman's Address: Ureteral Dilatation.
WILLIAM F. BRAASCH, Rochester, Minn.
Discussion to be opened by GUY L. HUNNER, Baltimore.

10. Urologic Findings in Diseases of the Central Nervous System.
JOHN R. CAULK, HARRY G. GREDITZER and FRANCIS M. BARNES, JR., St. Louis.

11. Report on Shell Fractures of Spine, Studied at Walter Reed General Hospital with Observations on Changes in Kidney and Bladder Function.
HARRY W. PLAGGEMEYER, Detroit.
Discussion to be opened by EDWARD L. KEYES, New York; JOHN T. GERAGHTY, Baltimore, and IRVING S. KOLL, Chicago.

12. Ureteral Transplantation in Inoperable Conditions of the Bladder. WILLIAM E. LOWER, Cleveland.
Discussion to be opened by EDWIN BEER, New York.

13. Hematogenous Infections of the Kidney.
WILLIAM J. MAYO, Rochester, Minn.
Discussion to be opened by HUGH H. YOUNG, Baltimore.

14. Clinical Observations in the Treatment of Nephrolithiasis. ALBERT J. OCHSNER, Chicago.
Discussion to be opened by H. G. BUGBEE, New York.

15. Department of Urology, American Expeditionary Forces.
HUGH H. YOUNG, Baltimore.
Discussion to be opened by HUGH CABOT, Boston.

Friday, June 13—9 a. m.

Meeting Place—Brighton, Casino

16. Some Problems in Urology in the United States Navy. (Lantern Demonstration.)
OSWALD S. LOWSLEY, New York.

17. The Army School of Urology.
GIDEON TIMBERLAKE, Baltimore.

18. The Civilian Venereal Disease Dispensary as a War Measure. (Being a report of the work done at the Illinois Social Hygiene League Dispensary, during and since the war). BUDD C. CORBUS, Chicago.
Discussion to be opened by FRANCIS R. HAGNER, Washington, D. C.; WILLIAM L. BAUM, Chicago, and HARRY E. KLEINSCHMIDT, Washington, D. C.

19. The Early Diagnosis and a Comparative Standardization of the Treatment of Syphilis.
ELMORE B. TAUBER, Cincinnati.
Discussion to be opened by ABRAHAM L. WOLBARSH, New York.

20. Some Urologic Aspects of Dermoid Cysts.
WILLIAM C. QUIMBY, Boston.

21. The Frequency and Significance of Granular Urethritis.
NOAH E. ARONSTAM, Detroit.
Discussion to be opened by FREDERICK W. ROBBINS, Detroit.

21. Congenital Peno-Rectal Fistula.
SIMON ENGLANDER, Cleveland.

SECTION ON ORTHOPEDIC SURGERY

MEETS IN CHALFONTE, ROOM 17—ALL MEETINGS

OFFICERS OF SECTION

Chairman—EMIL S. GEIST, Minneapolis.
Vice Chairman—BENJAMIN P. FARRELL, New York.
Secretary—HENRY B. THOMAS, Chicago.
Executive Committee—RUSSELL A. HIBBS, New York; EDWIN W. RYERSON, Chicago; ALBERT H. FREIBERG, Cincinnati.
(Stenographer—Miss LULU GAY, Philadelphia)

Wednesday, June 11—9 a. m.

Meeting Place—Chalfonte, Room 17

1. Intramedullary Beef-Bone Splints in Fractures of Long Bones: New Technic of Application. (Lantern Demonstration). EDWIN W. RYERSON, Chicago.
Discussion to be opened by RALPH R. FITCH, Rochester, N. Y., and FRANK E. PECKHAM, Providence, R. I.

2. Osteomyelitis (Lantern Demonstration).
JAMES W. SEVER, Boston.
Opening discussion by PEDRO CHUTRO, Buenos Aires, ALBERT H. FREIBERG, Cincinnati; ROBERT B. OSGOOD, Boston, and WILLIAM S. BAER, Baltimore.

3. Surgical Treatment and After-Care of Old Unreduced Pott's Fractures (Lantern Demonstration).
WILLIAM L. SNEED, New York.
Discussion to be opened by GEORGE W. HAWLEY, Bridgeport, Conn.; FREDERICK J. COTTON, Boston, and ZABDIEL B. ADAMS, Boston.

4. The Reconstruction of a Loss of Substance of the Humerus Following Shell Injury to Upper Arm: Report of Case. CHARLES L. SCUDDER, Boston.

5. Place of Special Work in the Army During the Emergency. ELLIOTT G. BRACKETT, Boston.
Discussion to be opened by SIR GEN. ROBERT JONES, Liverpool, England.

6. Secondary Treatment of War Amputés.
CARL C. YOUNT, New York.
Discussion to be opened by SIR GEN. ROBERT JONES, Liverpool, England.

7. Amputation Stumps in Relation to the Fitting of Artificial Limbs. E. J. ROSE, Gallipolis, Ohio.
Discussion to be opened by DAVID SILVER, Washington, D. C.; PHILIP D. WILSON, Columbus, Ohio; W. S. BAER, Baltimore, and JOHN S. DAVIS, Dallas, Texas.

Thursday, June 12—9 a. m.

Meeting Place—Chalfonte, Room 17

Election of Officers

8. Improvised Orthopedic Exercising Apparatus.
RUDOLPH S. REICH, Cleveland.
Discussion to be opened by W. G. STERN, Cleveland.

9. The Foot Problem in the Army.
WILLIAM C. PETERS, Bangor, Me.
Discussion to be opened by E. W. RYERSON, Chicago.

10. An Operation for Claw Foot (Lantern Demonstration).
RUSSELL A. HIBBS, New York.
Discussion to be opened by FRED J. FASSETT, Seattle, BENJAMIN P. FARRELL, New York, and MICHAEL HOKE, Atlanta, Ga.

11. Chairman's Address: Some of the Things that Orthopedic Surgery has Done for the War and that the War has Done for Orthopedic Surgery.
EMIL S. GEIST, Minneapolis.

12. Early Functional Results After Secondary Suture. Base Hospital No. 9, France (Lantern Demonstration).
GEORGE W. HAWLEY, New York.
Discussion to be opened by COL. H. W. GRAY, London, England, and WILLIAM W. PLUMMER, Buffalo.

13. Precombat Orthopedic Work in the United States.
JAMES T. RUGH, Philadelphia.
Discussion to be opened by EMIL S. GEIST, Minneapolis, and BRAINERD H. WHITBECK, New York.

14. Precombat Orthopedic Work Overseas.
HENRY P. MAUCK, Baltimore.
Discussion by Z. B. ADAMS, Boston; ROBERT J. GRAVES, Concord, N. H., and EBEN W. FISKE, Boston.

15. The Standardized Splints and Methods of Treatment in Bone and Joint Injury, A. E. F.
JOEL E. GOLDTHWAIT, Boston.
Discussion to be opened by SIR GEN. ROBERT JONES, Liverpool, England; WILLIAM W. PLUMMER, Buffalo, and WALLACE COLE, St. Paul.

Friday, June 13—9 a. m.

Meeting Place—Chalfonte, Room 17

16. The Orthopedic Surgeon and Industrial Accidents.
LEO B. MEYER, New York.
Discussion to be opened by JOHN C. A. GERSTER, New York, and STERLING BUNNELL, San Francisco.

17. The Curative Work Shop. JAMES C. GRAVES, JR.
Discussion to be opened by ELLIOTT G. BRACKETT, Boston; ZABDIEL B. ADAMS, Boston, and NATHANIEL ALLISON, St. Louis.

18. Fracture of the Neck of the Femur: An Analysis of One Hundred Cases. WILLIS C. CAMPBELL, Memphis, Tenn.
Discussion to be opened by ELLIOTT G. BRACKETT, Washington, D. C.

19. Ununited Fractures of the Hip.
MELVIN S. HENDERSON, Rochester, Minn.
Discussion to be opened by ELLIS W. JONES, Los Angeles, and WALLACE BLANCHARD, Chicago.
Discussion to be opened by ARTHUR J. GILLETTE, St. Paul, and JOHN S. DAVIS, Dallas, Texas.

20. Indications for Surgical Intervention in Peripheral Nerve Injuries (Lantern Demonstration).
KARL W. NEY, New Orleans.
Discussion to be opened by COL. H. M. GRAY, London, England; EMILE ALTMAN, New York; SAMUEL C. BALDWIN, Salt Lake City, and HARRY A. HALGREN, Watertown, Wis.

21. Operative Treatment of Peripheral Nerve Injuries.
CHARLES A. ELSBERG, New York.
Discussion to be opened by PEDRO CHUTRO, Embarkation Hospital No. 4; Frederick C. KIDNER, Detroit, and SAMUEL W. BOORSTEIN, New York.

22. Postoperative Treatment of Peripheral Nerve Injuries.
MURRAY S. DANFORTH, Providence, R. I.
Discussion to be opened by CHARLES H. FRAZIER, Philadelphia; PAUL F. STOOKEY, Lamont, Iowa; J. FRANK CORBETT, Minneapolis; WILLIAM W. PLUMMER, Buffalo, and DEAN D. LEWIS, Chicago.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

MEETS IN CHALFONTE, ROOM 16—ALL MEETINGS

OFFICERS OF SECTION

Chairman—WILLIAM M. BEACH, Pittsburgh.
Vice Chairman—FRANK SMITHIES, Chicago.
Secretary—HORACE W. SOPER, St. Louis.
Executive Committee—CHARLES G. STOCKTON, Buffalo; *DWIGHT H. MURRAY, Syracuse, N. Y.; ANTHONY BASSLER, New York.
(Stenographer—Mr. JEROME VICTORY, Jersey City, N. J.)

Wednesday, June 11—9 a. m.

Meeting Place—Chalfonte, Room 16

1. Chairman's Address: Spirit of the Physician in War and Peace. WILLIAM M. BEACH, Pittsburgh.

2. Constipation: A New Definition, the Primary Causes and Its Hygienic Treatment.
DWIGHT H. MURRAY, Syracuse, N. Y.
Discussion to be opened by WILLIAM H. AXTELL, Bellingham, Wash.; ROLLA CAMDEN, Parkersburgh, W. Va.; J. M. FRICK, Toledo, Ohio, and V. LEE FITZGERALD, Providence, R. I.

3. Sphincter Inhibition as a Cause of Constipation and Other Gastro-Intestinal Disturbances.
JEROME M. LYNCH, New York.
Discussion to be opened by JOSEPH C. BLOODGOOD, Baltimore; J. COLES BRICK, Philadelphia; RALPH W. JACKSON, Fall River, Mass., and JAMES A. MACMILLAN, Detroit.

4. Proctology in a War Hospital.
LOUIS J. HIRSCHMAN, Detroit.
Discussion to be opened by GRANVILLE S. HANES, Louisville, Ky.; ALOIS B. GRAHAM, Indianapolis; D. C. MCKENNEY, Buffalo, and ARTHUR HEBB, Baltimore.

5. Late Syphilis Within the Rectum.
CHARLES J. DRUECK, Chicago.
Discussion to be opened by JOHN L. JELKS, Memphis, Tenn.; W. H. KIGER, Los Angeles; G. M. LINTHICUM, Baltimore, and WILLIAM H. STAUFFER, St. Louis.

6. Stricture of the Rectum. FRANK C. YEOMANS, New York.
Discussion to be opened by HOLLAND H. DONALDSON, Pittsburgh; CHARLES S. GILMAN, Boston; ROBERT T. MORRIS, New York, and J. RAWSON PENNINGTON, Chicago.

7. Examination of the Patient.
J. RAWSON PENNINGTON, Chicago.
Discussion to be opened by LEWIS H. ADLER, JR., Philadelphia; GEORGE B. EVANS, Dayton, Ohio; DONLEY C. HAWLEY, Burlington, Vt.; JAMES A. MCVEIGH, Detroit, and LOUIS J. KROUSE, Cincinnati.

Thursday, June 12—9 a. m.

Meeting Place—Chalfonte, Room 16

Election of Officers

8. Gastric Cell Primary Atrophy.
ANTHONY BASSLER, New York.
Discussion to be opened by MAX EINHORN, New York, and FRANK SMITHIES, Chicago.

9. Further Observations on the Gastro-Intestinal Disturbances Met with in Pernicious Anemia.
JULIUS FRIEDENWALD and THEODORE H. MORRISON, Baltimore.
Discussion to be opened by ARTHUR F. CHACE, New York, and MARTIN E. REHFUSS, Philadelphia.

10. The Metabolic Gradient Underlying Peristalsis.
WALTER C. ALVAREZ, San Francisco.
Discussion to be opened by JACOB KAUFFMANN, New York, and WALTER B. CANNON, Boston.

11. The Late Results of Supposedly Successful Operations on the Digestive Tract.
THOMAS R. BROWN, Baltimore.
Discussion to be opened by JOHN A. LICHTY, Pittsburgh, and WILLY MEYER, New York.

12. Certain Limitations of Roentgen-Ray Diagnosis of Gastro-Intestinal Diseases. DUDLEY ROBERTS, Brooklyn.
Discussion to be opened by GEORGE E. PFAHLER, Philadelphia, and JAMES T. CASE, Battle Creek, Mich.

13. The Operability of Cancer of the Stomach as Determined by the Roentgen Ray.
RUSSELL D. CARMAN, Rochester, Minn.
Discussion to be opened by R. WALTER MILLS, St. Louis, and LEWIS GREGORY COLE, New York.

Friday, June 13—9 a. m.

Meeting Place—Chalfonte, Room 16

14. Further Experiences with the String Test.
MAX EINHORN, New York.
Discussion to be opened by WILLIAM GERRY MORGAN, Washington, D. C., and ALLEN A. JONES, Buffalo.

15. The Importance of Detecting the Encysted Forms of the Parasitic Protozoa in the Feces.
SIDNEY K. SIMON, New Orleans.
Discussion to be opened by ALBERT BERNHEIM, Philadelphia.

16. The Prevalence of Amoeba, *Cercomonas Intestinalis Hominis*, and Pellagrous Infection in the South. The Responsibility for Which Rests on Nation and State. Suggestions as to Means of Control.
JOHN J. JELKS, Memphis, Tenn.
Discussion to be opened by JAMES C. JOHNSON, Atlanta, Ga.; SIDNEY K. SIMON, New Orleans.

17. Common Bile Duct Obstruction: Its Incidence and Clinical Recognition. FRANK SMITHIES, Chicago.
Discussion to be opened by DAVID RIESMAN, Philadelphia, and JOHN M. T. FINNEY, Baltimore.

18. Influence of Endocrine Functioning on Gastric-Intestinal Conditions. CLEMENT R. JONES, Pittsburgh.
Discussion to be opened by GEDIDE A. FRIEDMAN, New York, and JOHN C. HEMMETER, Baltimore.

19. Progress in Gastro-Enterology During the World War.
SEALE HARRIS, Birmingham, Ala.
Discussion to be opened by LOUIS M. GOMPERTZ, New Haven, Conn., and GEORGE B. EUSTERMAN, Rochester, Minn.

20. The Gastric Hypermotility Associated with Diseases of the Gallbladder, Duodenum and Appendix: A Clinical and Experimental Study.
GEORGE DAVID STEWART and WILLIAM HOWARD BARBER, New York.
Discussion to be opened by ANTHONY BASSLER, New York, and R. WALTER MILLS, St. Louis.

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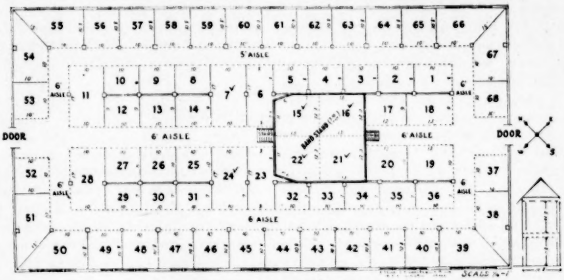
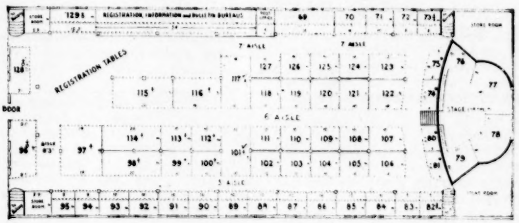
ATTRACTIONS AT THE EXHIBITION

The successful practice of medicine and surgery today depends on many different factors. Not the least of these is the service rendered by the manufacturers of medical and surgical supplies. What science conceives, these men execute. Like the faithful attendant in the operating room, they place in the physicians' hands those instruments, pharmaceuticals, appliances, supplies, textbooks, etc., needed in doing good, conscientious work and in following the latest technic in the treatment of disease.

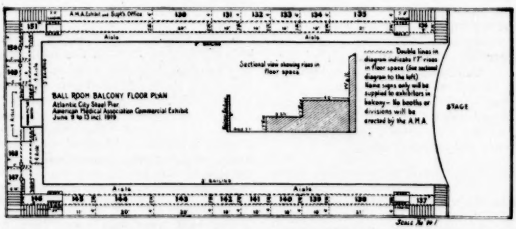
At the Commercial Exhibit this year one may see at their best the fruits of the medical and surgical manufacturing industry. The military hospital has



FLOOR PLAN OF ARCADE.



FLOOR PLAN OF BALL ROOM.


BALL ROOM BALCONY FLOOR PLAN
Atlantic City Steel Pier
American Medical Association Commercial Exhibit
June 9 to 13 incl. 1919
Sectional view showing rises in floor space.
STAGE

FLOOR PLAN OF BALL ROOM BALCONY.

acted as a crucible out of which has come much that is new and better in diagnosis, treatment and surgery. The latter, in turn, have been responsible for the development of new appliances, new instruments, new remedies, new literature, etc. The bringing together into one unified exposition of more than a hundred exhibitors gives the physician a wonderful opportunity to see at first hand many of these new improvements as well as the best in those standard supplies which he uses every day.

Although a great deal of care will be taken to make the different exhibits pleasing and attractive to the eye, it should be remembered that they will be far more than mere lifeless displays. Here at the various booths will be found skilled technicians, competent demonstrators and well-informed attendants, able to answer questions or give special information on their respective subjects. Many of these men are experts or authorities in their special fields and the doctor who does not take full advantage of their prescence will miss one of the stimulating features of the annual meeting.

The floor plans shown, the index of exhibitors and the brief descriptions of exhibits on the following pages are given as an aid toward visualizing what the Victory Meeting Exposition will have to offer in the way of interest; instruction and stimulus to better practice.

Do not visit the exhibit hurriedly, or try in one hasty trip round the hall to assimilate all of the valuable and practical information that is to be obtained. Take sufficient time to go from booth to booth, making a close and studied inspection of the innovations and improvements in the accessories to medical practice which the exhibitors are placing before you at considerable trouble and expense. The exhibition will formally open at noon Monday, June 9—it will be open from 8 a. m. to 6 p. m. each day—and will close Friday noon, June 13.

While these advance notices offer a representative "preview" of the exhibition, still, many firms failed to supply advance information on their proposed displays; consequently it is left to the visitor to make a thorough tour of the Arcade, the Ball Room, and the Ball Room Balcony, to see everything that is there assembled for his benefit and information. See the exhibits and talk to the exhibitors freely, without feeling that you are expected to buy.

Dr. I. E. Leonard, *Local Chairman*
2842 Atlantic Avenue
Atlantic City, N. J.

Will C. Braun, *Supt. of Exhibits*
A. M. A., 535 N. Dearborn Street
Chicago

ANESTHESIA APPARATUS

The various exhibits and demonstrations of Anesthesia Apparatus will furnish an unusual opportunity to inspect the newest and best methods in this field. Machines for hospital, office and bedside use will be shown.

—The Foregger Co., Space 121, will show a new hospital apparatus for gas-oxygen-ether vapor anesthesia on the "Gwathmey Sight Feed" style. The story of the creation of this new model may be of interest. Shortly after this country entered into the war the Foregger Co. built upon design of Dr. Chas. H. Gallagher of Ithaca, a special Army Model on the Gwathmey principle but with some new features and particularly constructed for rough handling in the war zone. Dr. Gallagher ended his career in France.

—The Scientific Apparatus Co., New York, at Space 103, will interest you in up-to-the-minute anesthesia apparatus. They will have very interesting machines to show you. Here, also, may be seen demonstrated the Anaesthetometer—an automatic ether administrator, together with the Connell Suction Insufflation Apparatus for nose and throat work.

—C. M. Sorensen Co., Inc., New York, Space 118, will demonstrate the Sorensen Tankless Air Compressor, showing both the portable and office type apparatus, used in nose and throat work for spraying, nebulizing and suction. They will also give demonstrations of the Yankhauer Tonsillotomy Outfit; also making a special show of the Dr. Bronower's Vacuum-Ether Apparatus for suction and insufflation anesthesia. There will also be an exhibit of the Dr. L. H. Coffin Apparatus, as well as the Sorensen Sinus Vacuum Cleanser.

—Toledo Technical Appliance Co., Toledo, Space 43, will exhibit the McKesson Anesthetic Appliances, confining their exhibit to three models for hospital, office and home or portable use, embodying in each the well known intermittent flow features, which regulate the administration of the gases automatically, through the action of the respiration. Each model is designed directly to meet the requirements sought, whether in hospital work, office work, or for minor operations and obstetrics in the home.

BOOKS

The past year has been very prolific in medical literature, especially works on surgery and reconstruction occasioned by the extensive work performed in the European war zone and military hospitals. Much of it has been of a high order. With practically every one of the better publishers represented in the exhibits, the physician can in a remarkably short time get in touch with the newest works and judge for himself as to their usefulness in his own work.

—P. Blakiston's Son & Co., Philadelphia, Space 116, announce that Davis' Plastic Surgery will be ready for the meeting in June. Dr. John Staige Davis of Johns Hopkins (Captain, M. C., U. S. Army) has had especial opportunity to study and investigate in this field and has written a book of unusual interest and value. Among other important works to be exhibited, are Gould and Pyle, "Medicine and Surgery," new edition, thoroughly revised, enlarged, and made even more useful than before as a practical book of ready reference; a new edition of Sequeira Diseases of the Skin; and many other of their recent practical works.

—F. A. Davis Co., Philadelphia, Space 19, will show a number of interesting new books, including Dr. Arnold Sturmdorf's "Gynoplastic Technology," illustrated with many handsomely colored plates. The recently completed DaCosta "Handbook of Medical Treatment," in two volumes, will also be in evidence. Also the new (4th) edition of Bassler's "Diseases of the Stomach," Scripture and Jackson "On Correction of Speech Disorders," and Hess' new book, "Principles and Practice of Infant Feeding."

—J. B. Lippincott Co., Philadelphia, Spaces 66 and 67, will exhibit their large line of medical, pharmaceutical, nursing textbooks and works of reference. The series of enlarged anatomical studies from Piersol's "Human Anatomy" will be a special feature. Among other new publications there will be Hirst's "Atlas of Operative Gynecology" with 210 large illustrations nearly all in color, showing the separate steps of each operative procedure; Fuch's "Textbook of Ophthalmology," fifth edition.

—The Macmillan Co., New York, Space 92, will exhibit among their authoritative medical works the new *Journal of Industrial Hygiene*, an international monthly magazine, of particular importance in this time of industrial unrest, which ought to interest government as well as medical and industrial authorities.

—The C. V. Mosby Co., St. Louis, Space 117, will show their line of standard and new medical, surgical, dental and nursing publications. Among the new works shown will be: Wall's Sex Worship, Leavitt's Operations of Obstetrics, Hertzler's Peritoneum (2 vols.), Pottenger's Symptoms of Visceral Disease, MacLeod's Physiology and Biochemistry, Levinson's Cerebrospinal Fluid, etc.

—Thomas Nelson & Bros., New York, Space 124, will interest you in the Nelson Loose-Leaf Medicine in Six Volumes. Call at this booth and learn more about this practical system of accumulating and preserving good medical literature.

—The Oxford University Press, New York, will exhibit at Space 120. The Oxford Press is 451 years old and is able to produce a list of its publications for 334 years. Since the A. M. A. Exposition is educational, this Press has decided to make some historical exhibits in connection with early printing at Oxford and some specially interesting

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material in regard to early medical publishing. This exhibit will include all of the Oxford Medical Publications, among which are to be noted the already famous Oxford Loose-Leaf Medicine and Surgery, the Oxford Medical Belles-Lettres, over thirty new Medical Monographs and a complete exhibit of over 225 titles.

—Rebman Co., New York, Space 53, will show a new reprint of Toldt's "Atlas of Human Anatomy." An increased use of the visual or graphic method, both in the acquirement and in the revivification of knowledge, is a feature of the age in all educational departments, and it will be demonstrated that Toldt's "Atlas of Human Anatomy" is an adequate application of the method to the study of human anatomy

—W. B. Saunders Co., Philadelphia, Space 97, will exhibit aside from the new editions of many of their standard publications, a new work on surgery, Warbasse's Surgical Treatment, the current issue of the Medical Clinics of North America, and of the Surgical Clinics of Chicago, Ewing's Neoplastic Diseases, the New Mayo Clinic Volume, Koll's Diseases of the Male Urethra, Smith's Genito-Urinary Surgery, Hirst's (J. C.) Obstetrics and his Gynecology, Griffith's Pediatrics, Rivas' Human Parasitology, McJunkin's Clinical Microscopy and Chemistry, Heineman on Milk, Sayre and Havenhill's Pharmacy, Friedenwald and Ruhrah's Diet, Overton and Denno's, The Health Officer, and several books of special value in reconstruction and rehabilitation.

—Wm. Wood & Co., New York, Space 123, invite visiting physicians to inspect their unusually attractive selection of Medical and Surgical books. This firm endeavors consistently to publish only works of real scientific value. All branches are here represented and each title is well worth looking into. Visitors will be cordially welcomed.

—The Year Book Publishers, Chicago, Space 70, will exhibit the Practical Medicine Series in eight volumes, devoted to contemporary medical and surgical progress. In its eighteen years of publication this series has become popular with the profession, meeting alike the requirements of the general practitioner and those of the specialist. The exhibit will include 1919 and previous issues.

FOODS AND BEVERAGES

More and more are we coming to depend on the science of dietetics in medical practice. Among the exhibitors will be a number of firms that are supplying scientifically prepared food products that fill special needs in the practice of medicine. Information regarding such products is an asset to any physician.

—Borcherdt Malt Extract Co., Chicago, Space 106, will exhibit Borcherdt's Malt Soup-Extract and Borcherdt's Sugar, two distinctively Borcherdt products. They will show their original Malt Soup, also Malt Sugar in crystalline form.

—The Dennos Products Co., Chicago, Space 72, will again hand out their attractive and well known prescription pencil. Dennos Food itself will be the principal feature of this exhibit, and their Pennsylvania and Ohio representative will be in charge.

—The Dry Milk Co., New York, Space 32, will show their Honor Brand Dry Milk for the first time at a Convention. They will distribute literature and supply information as to the use of Dry Milk for infants and invalids. Dry Milk has become quite a factor, and conventionists will have an opportunity to learn about its manufacture and use. Demonstration as to the condition of the curd when precipitated as compared with the curd of liquid milk will also be given. They will also show their Sterling Milk Sugar.

—The Horlick's Malted Milk Co., Racine, Wis., Space 96, will have representatives in attendance at their booth to distribute samples and furnish information regarding Horlick's Malted Milk. The value of Horlick's Malted Milk as a light, digestible, and nutritious food will be demonstrated to visitors.

—Mead, Johnson & Co., Evansville, Ind., Space 122. One of the special features of the Dextri-Maltose exhibit will be the performance of tests showing the effect of potassium and sodium salts on curd formation in milk and how this action is responsible for the production of three forms of Mead's Dextri-Maltose—one containing sodium, another containing potassium and the third being salt-free.

—The Kaffee Hag Corporation, New York, Spaces 107 and 108, will have an interesting exhibit of KAFFEE HAG. Coffee in all of its stages, from the blossom to the caffein-free article will be shown. Representatives will be on hand to welcome the visiting physicians and to tell any physician about KAFFEE HAG who is not already familiar with this well known brand of caffein-free coffee.

—Kumyss, Inc., New York, Spaces 149 and 150, will demonstrate Dr. Brush's Kumyss, "Sparkling Milk"—known for forty years as a fermented milk—digested and assimilated readily, even by the most delicate stomach. A food indicated in diabetes and nephritis; in gastric and intestinal disturbances, etc.

—Mellin's Food Co., Boston, Spaces 119 and 126, will interest you in infant feeding, a subject of serious import to physicians. In recognition of the fact that one of the important features of the Commercial Exhibit of the American Medical Association is to give physicians an opportunity to obtain information relative to products of particular usefulness to them, representatives of this company will be pleased to answer all inquiries regarding Mellin's Food and its application as a modifier of milk and to offer some suggestions that may be helpful toward a better management of an infant's diet.

—The Welch Grape Juice Co., Space 78. In this, their Fiftieth Year of National Service, Welch's Grape Juice is more generally presented than ever before. Don't forget to try Grapelade, the pure grape spread so well liked by the A. E. F. and now offered on the domestic market. It's really delicious. It will be served at their booth.

INSTRUMENTS, APPARATUS AND FURNITURE

Many new types of equipment will be on exhibition this year. A visit to these exhibits will give many valuable ideas as to new methods, new technic, etc. Here the physician cannot only see these new devices but also have their uses and advantages clearly demonstrated by skilled technical men.

—W. D. Allison Co., at Space 76, will exhibit office furniture consisting of modern appliances for physicians' private offices. They will also show their specialist's chairs, cabinets, stools, waste receptacles, extension light brackets, extension curtain brackets; the Craftsman Chair used by the specialist and the general practitioner; their examining tables, instrument and medicine cabinets, chairs, stools and various articles of interest to the profession. They will feature an irrigating table with complete outfit for irrigation that will interest gynecologists and genito-urinary men.

—An interesting exhibit presenting new ideas will be that of the A. S. Aloe Co., St. Louis, Space 71. There you will see, made in a minute, a Carbon-Dioxid Ice Pencil, 110 degrees below zero, Fahrenheit. The adaptations of the electric current to therapeutic uses will be demonstrated with the Aloe Electro-Therapeutic Cabinet. The Microscope Outfit that enables one to begin practical work the day you get it, will also be shown.

—The American Surgical Specialty Co., Chicago, Space 83, will show a line of instruments of interest to the oral surgeon and general practitioner. They have combined their electrically lighted equipment into a complete diagnostic and operating set. An especially interesting feature of their exhibit will be their Diagnostolite, a clean, cool lamp of great brilliancy, suitable for transillumination and examination.

—Bard-Parker Co., New York, Space 125, will feature the Bard-Parker Detachable Blade Knife. This knife has detachable wafer blades, operating and abscess blades, all interchangeable, made of razor steel and with razor edge.

—W. A. Baum Co., Inc., New York, Space 40, will have an exhibit of the Baumanometer, a highly developed blood pressure apparatus for use in laboratories and daily practice. The instrument is described as a "Super-Sphyg" and is a Precision Gravity-Gage for Blood Pressure. The question of blood pressure is, today, such an absorbing one that it will be of benefit to the visiting physician to inquire into the merits of this modern instrument.

—Becton, Dickinson & Co., Rutherford, N. J., Spaces 99 and 100, will dis-

play the genuine Luer Syringes, Yale Quality Needles, Bedeco Thermometers, Kehler Stethoscopes, Ace All Cotton Elastic Bandages and Asepto Breast Pumps. The new features of their exhibit will be the Ace Bandage and the Asepto Breast Pump.

—Bernstein Mfg. Co., Philadelphia, Spaces 138 and 139, will exhibit their usual line of quality steel furniture and sterilizing apparatus, where they will be glad to greet their friends.

—Frank S. Betz Co., Hammond, Ind., Spaces 7, 8 and 9, will feature specially constructed hospital furniture, consisting of instrument cabinets and a new model operating table. They also will show for the first time a high pressure sterilizer adaptable to service in every physician's office; also a very large display of American made surgical instruments.

—Wilmot Castle Co., Rochester, N. Y., Space 1, will exhibit several new "Castle-Rochester" Sterilizers. They should be of interest to all physicians who want up-to-date equipment for their offices. Besides office sterilizers, they will show a new combination outfit for use in small hospitals.

—The DeVilbiss Mfg. Co., Toledo, Spaces 25 and 26, will have a complete exhibit of their guaranteed nose and throat Atomers, for professional and home use. A first showing of new outfits recently added to their line will be of special interest. Several factory and road representatives will be in attendance.

—Charles F. Hindle, New York, Space 144, will exhibit electrocardiograph equipments for photographically recording the activities of the heart. Two models of the string galvanometer with complete optical systems and recording instruments will also be exhibited. The smaller model will be of particular interest to the physician desiring to see equipment for office use. Frequent demonstrations will be given. Typical electrocardiograms showing many of the heart's irregularities will be extensively illustrated.

—The Jaeckh Mfg. Co., Cincinnati, Space 81, will have an interesting exhibit of the latest improved Robertson Tankless Compressed Air and Vacuum Machines and Cabinets, including improved ether anesthesia apparatus with simple warming device, apparatus for evacuating and medicating the sinuses, atomizers, nebulizers, etc. Also Gold Medal hand operated compressed air outfits. Dr. Robertson will be in charge.

—E. Leitz, Inc., New York, Spaces 104 and 109, will demonstrate a number of new apparatus, possibly with representative models if they are available at the time of the exhibit.

—Charles Lentz & Sons, Philadelphia, Space 88, will exhibit a general line of Surgical Instruments, including some of the most modern instruments they manufacture for some of the leading surgeons. The new Lentz Tonsillectome will be one of the most interesting, especially to nose and throat specialists.

—The Lungmotor Co., Boston, Space 18, will demonstrate the Lungmotor, a resuscitating device of merit. Instantly adjustable—new-born to adult. Used by the U. S. Government, American Red Cross, Bellevue Hospital, leading industries, cities, hospitals, beaches, etc.

—V. Mueller & Co., Chicago, Spaces 55, 56 and 57, will have, as in former years, an extensive exhibit of instruments for the specialist in every branch of surgery. The visitors will see at this booth, practically everything that is new in instruments and apparatus for their particular line of work. Electrically driven bone surgery apparatus, electrically driven anesthesia and suction apparatus of the most modern types will be demonstrated. A special feature will be a complete collection of illuminating and exploring instruments for use in every cavity of the human body.

—Ostby & Barton Co., Providence, R. I., Space 12, will show for the first time their line of quality "Triple Crown Surgical Instruments and Needles made in the United States." These people were manufacturing jewelers for forty years. During the war they turned the energy and push of their large six story factory into the manufacture of quality surgical instruments and needles. The fine work that the skilful, careful jewelers have turned out predicts a bright and prosperous future for instruments made in the United States.

—Harvey R. Pierce Co., Philadelphia, Space 65, among other things, will feature the Albee fracture and orthopedic table, U. S. Army standard splints and other fracture treatment apparatus; also a Landon spinal mercury manometer.

—Sanborn Co., Boston, Space 82, will demonstrate the construction and operation of the improved Sanborn Blood Pressure Outfit. They will also show for the first time, another important addition to medical equipment: the Sanborn Portable Respiration Apparatus for measuring absorption of oxygen, as required in the study of total metabolism. Without gas analysis physicians will have an opportunity to observe and directly determine the amount of oxygen being taken into the respiratory system during a definite interval.

—The J. R. Siebrandt Mfg. Co., Kansas City, Mo., Space 89, will demonstrate Siebrandt's "Eveready," a modern surgical utility appliance for treatment of fractures where traction or suspension are necessary. Siebrandt's "Eveready" is a Buck's Extension, which, with its special attachment, is modified to meet every height or angle for traction or suspension.

—C. J. Tagliabue Mfg. Co., Brooklyn, Space 105, will exhibit the "Tag-Roesch" Sphygmomanometer. Interesting demonstrations will be given. Look for the sign of the "Tag."

— Taylor Instrument Companies, Rochester, N. Y., will exhibit a new design of an office type Sphygmomanometer. This instrument is so designed that it may stand on the physician's desk or be attached to a panel on the wall, well removed from the patient. The diameter of the dial is 6 inches. The oscillations on the hand of the dial by reason of the enlarged field are magnified. This instrument is designed specifically for hospitals, offices and clinics. Taylor Instrument Companies are also distributing a small booklet with the newer findings on the value of humidity in medical practice.

—George Tiemann & Co., New York, Space 68, will have many new designs of instruments of their own special manufacture on exhibition at their booth, including the Bennett, Flagg and Hasbrouck inhalers for ether and nitrous oxygen, the Boch-Benedict colorimeter, Kaliski salvarsan apparatus, Wight's blood transfusion apparatus, Kemp proctoclysis, direct light electric ophthalmoscopes and accessory instruments and a number of surgical instruments of new design.

—The Weder Mfg. Co., Philadelphia, Space 6, will display their "De Lyte Surgeon" Diagnostic Case. They will also feature their Simplex Surgeon, an interesting Pocket Surgical Set.

OPTICAL GOODS

The war has given increased impetus to the manufacture of optical goods in the United States. The various manufacturers to be represented at the meeting are now in a better position than ever before to supply the needs of the profession. A study of their displays will be time well spent.

—Bausch & Lomb Optical Co., Rochester, N. Y., will exhibit in Spaces 44 and 45. Although they took full part in wartime activities they have resumed the most of their regular service. They will show their physician's microscopes, a new model freezing microtome, and centrifuges. Particular interest will attach to the exhibit of ophthalmological apparatus, the development of which is especially notable, and to the hemocytometers which are of Bausch & Lomb manufacture.

—The DeZeng-Standard Co. of Camden, N. J., manufacturers of Eye, Ear, Nose and Throat Diagnostic Equipment, will exhibit their products in Space 11. In addition to their standard equipment, they will have several new intruments which will be shown for the first time at this meeting, among them a new Electric Ophthalmoscope, a new Electric Retinoscope and a new Phoro-Optometer. Demonstrations will be given daily by expert attendants.

—The General Optical Co., Mount Vernon, N. Y., Space 17, will show a number of instruments especially designed for ophthalmologists. During the war, almost the entire production of the company was given over to war orders. Particularly popular at their exhibit will be the Loring Ophthalmoscope. This instrument will be displayed with the other products in the Genothalmic Sets consisting of Hare Marple Ophthalmoscope, Genothalmic Retinoscope with the Crampton junior, senior or cord lighting handles. For the first time their entire new line of Genothalmic

Sets will be shown. The Hare Automatic Perimeter with the automatic color changing device will also be on display as will the Universal Ophthalmometer. Practical demonstrations will be given.

—E. B. Meyrowitz, Incorporated, New York, Spaces 38 and 39, will exhibit specialties for eye, ear, nose and throat work. Of particular interest will be their Unistat occupying a floor space of 14 x 14 inches, which produces cautery, high frequency, galvanic and diagnostic light currents, as well as pressure, suction and pneumomassage. Also to the Braun Adenotome: A combination of curette and adenotome possessing all the advantages of either.

ORTHOPEDIC APPLIANCES, CORSETS AND CLOTHING

In these exhibits will be found tried and proved appliances for correcting bone injuries, deformities, malposition; also surgical and maternity corsets, hospital uniforms, etc.

—Ambulatory Pneumatic Splint Mfg. Co., Space 79, will demonstrate the use of Ambulatory Pneumatic Splints, in the reduction and treatment of fractures of the hip, thigh and leg by means of which patient may remain out of bed. They will also show the Ambumatic Washable Abdominal Supporter. The Henning Artificial Hand and Arm will also be demonstrated.

—Anatomik Shoes will be shown at Space 3 by the Anatomik Footwear Company of New York. They will show how this well-known men's, women's and children's shoe prevents and corrects many foot troubles. Opportunity will be afforded every member of the A. M. A. who acquires "Boardwalk feet" while in Atlantic City to learn from personal experience the relief obtainable in Anatomik shoes.

—The Berger Bros. Co., New Haven, Conn., Space 35, are planning to exhibit a complete line of Spencer supports for visceral ptoses, sacro-iliac strain, intestinal stasis, floating kidney, hernia; prenatal supports, etc. The exhibit will consist of supports for both men and women.

—The Carnes Artificial Limb Co., Kansas City, Mo., will have representing them at Booth 36 one armless man and a man having lost just one arm. Both of these men will demonstrate willingly what may be accomplished by the use of a Carnes Arm, and show conclusively that a man who has lost one or both of his arms is not to be considered as helpless.

—The Earnshaw Knitting Co., Chicago, Space 75, will show how to dress a baby completely without pin or button in Vanta Baby Garments. For years theirs has been one of the popular booths, by reason of the unique and attractive display furnished, as well as by the interesting demonstrations of competent nurses representing them. This year for the first time, they will show an outfit for babies which is put on with one movement.

—Stover & Bean Co., Lowell, Mass., Space 27, will show their Socket-Fit Arch and Heel Shoe. This shoe is said to be nature-shaped, placing the foot in its natural barefoot position, and by specially constructed patterns and individual modeling of the last, holds the foot in place, giving the proper amount of support to the bones and muscles so that there is no undue pressure or strain on any part of the foot.

—Weissfeld Bros., New York, Space 80, will show their Hospital Wearing Apparel, a most up-to-date line. Uniforms for the surgeon, the nurse and office attendant. A fine line of Palm Beach and Mohair suits will also be on exhibition. A souvenir given to every visitor.

—The Wright Wire Co., Worcester, Mass., Space 31, will exhibit their Excelsior Universal Wire Gauze Splint; also their Excelsior Automobile Towline. The splint is furnished rolled, the size of an ordinary roller bandage, and enclosed in a paper carton. The towline is made of steel wire cable, five-sixteenths inch in diameter, with manila slings and sister hooks for ready adjustment, and all enclosed in a canvas bag.

PHARMACEUTICALS AND BIOLOGIC PRODUCTS

The work of the physician is so intimately dependent on these products that an acquaintance with the different pharmaceutical houses, their preparations, their service, etc., is often of great advantage. At the Commercial Exhibit is his opportunity to meet representatives of such firms, and see pleasing displays of their new as well as standard remedies and secure information about the application of these remedies, which will be of practical value in every day work.

—The Abbott Laboratories, Chicago, Space 69, will feature American-made medicinal chemicals. Not only will they exhibit a full line of the Dakin antiseptics, Chlorazene, Dichloramine-T, Chlorcosane and Halazone, but they will bring in evidence several American-made synthetic medicinal chemicals for which it holds licenses from the Federal Trade Commission under German patents. Special attention in this exhibit will be given to Barbital, Procaine and Phenylcinchoninic Acid.

—Armour & Co., Chicago, Space 113, will exhibit a complete line of endocrine gland preparations and organotherapeutic agents; and will also show their Sterilized Surgical Catgut Ligatures, plain and chromic. The Armour Ligatures are manufactured from material selected especially for surgical purposes. Pepsin, Pancreatin, Thyroids, Corpus Luteum, Pituitary Liquid and other endocrine gland preparations will also be featured.

—B. B. Culture Laboratory, Inc., Yonkers, N. Y., Space 2, will exhibit B. B. Culture, a liquid suspension of Bacillus Bulgaricus. The advantages of the preparation as a biologic antiseptic in internal and external use will be explained and microscopic slides of the culture shown. Complimentary bottles will be mailed to visiting physicians who leave their names.

—The Hollister-Wilson Laboratories, Chicago, will exhibit at Spaces 94 and 95 their long-established line of Ligatures, Sutures and Surgical Material, and will show in addition a full line of glandular Autacoids, Organic Extracts, Enzymes and Abattoir Pharmaceuticals. By proper laboratory methods they are able to assure the identity and therapeutic activity of the Autocoids, Enzymes or Organic Derivatives represented in the finished product.

—Hynson, Westcott & Dunning, Baltimore, Space 114, will introduce new ideas in the manner of showing their products. A competent staff of representatives under the direction of Mr. W. Rodney Burton, will be in attendance to give visiting physicians just such information as they desire regarding the firm's therapeutic specialties and diagnostic agents and appliances. The new local anesthetic — Phenmethylol — and the new antispasmodic—Benzyl Benzoate—will be interesting features.

—The Kolynos Company, New Haven, Conn., Space 20, will exhibit experiments demonstrating the germicidal properties of Kolynos Dental Cream and illustrating its destructive power against both pathogenic organisms and those nonpathogenic bacteria which are believed to play an important rôle in the development of dental caries. The Kolynos Co. maintains chemical and bacteriological laboratories devoted to research work in oral hygiene.

—The Maltbie Chemical Company, Newark, N. J., Space 112, the manufacturers of Calcreose, will display the various forms in which Calcreose, a combination of calcium with pure beechwood creosote, can be administered, solution, powder and tablets, in original packages, and will have for distribution all information available as to the effectiveness of this new creosote product.

—The Maltine Company, Brooklyn, Space 101, will exhibit its well-known line, making a particular feature of Maltine Malt Soup Extract, with which the preparation of Malt Soup, as devised by Keller, becomes easy and satisfactory. Visiting lists and sets of memorandum books will as usual be presented to visiting physicians.

—H. A. Metz Laboratories, Space 135, will present to conventionists an exhibit of their products, Salvarsan (Arsphenamine-Metz), Neosalvarsan (Neoarsphenamine-Metz), and Novocain (Procaine-Metz). Methods of prepation of salvarsan solution will be demonstrated and other unique features will be presented, which promises to make this display particularly interesting to every visiting physician.

—The Pulvola Chemical Company of Jersey City, Space 4, will exhibit their line of nonabsorbent powders—the Dolomol Stearates, Pulvola Toilet ("The Doctors' Baby Powder") and Pulvola Foot Powders. They will show their odorless, tasteless, impalpable, dry, white Ichthyol—as combined with Dolomol. Their unique demonstration, "The Tale the Two Tumblers Tell," is an eye-opener on toilet powders and "dry ointments," and invariably attracts attention and keen interest wherever shown.

—The Radium Chemical Company of Pittsburgh, Space 111, will display a

full line of surface and cavity applicators, including necessary screens, etc. Their representatives will give demonstrations of the physical properties of radium, and will be prepared to discuss the technic of its application. Conventionists are cordially invited to visit their Laboratories at Pittsburgh, either before or after the meeting in Atlantic City.

—E. R. Squibb & Sons, New York, Spaces 15, 16, 21, 22 (band stand), in addition to their chemical and pharmaceutical preparations, an instructive display will be made of their biological and biochemical products. The position of the band stand, which has been secured for their exhibit, makes it possible to plan such a comprehensive display that it cannot fail to attract and hold the interest of the visiting physician.

—The Takamine Laboratory, Inc., New York, Space 84, intend to hold clinics for the benefit of conventionists, showing the method of making solutions and the proper injection of Arsaminol and Neoarsaminol. The clinic will be in charge of a biologist of note, and physicians are cordially invited to attend it.

X-RAY AND ELECTROTHERAPEUTIC APPARATUS AND ACCESSORIES

The applications of roentgenology and electrotherapeutics have increased so rapidly that it is difficult to keep apace. This year's exhibits of x-ray outfits and other electrical equipment will show many of the recent advances in this field, and likewise reveal to the physician the extent to which the various manufacturers are cooperating with the profession by furnishing the machinery, supplies, etc., for doing this important work.

—The Baker Electric Co., Hartford, Conn., Space 141, will show their Baker Military Model T Static Machine. Powerful, light and compact. Ample capacity for all standard static work. Standardized, calibrated, graduated. You will be very welcome; their booth is at your service, and they will feel it both an honor and pleasure to show you what they have and to give any explanation and information you may desire.

—The Campbell Electric Co., Lynn, Mass., Spaces 86 and 87, will exhibit a Sure X Transformer, such as they furnished to equip the Mexican border hospitals and the original Pershing Expedition and over 100 reconstruction and debarkation hospitals in France and the United States. The Campbell Motor Driven Tube Tilt Table, besides the latest Bedside Coolidge Unit and a complete line of high frequency apparatus, will also be shown.

—The Chicago Surgical and Electrical Company, Chicago, Space 110, will show an entirely new apparatus, the Electrothermophore, for the treatment of specific urethritis by heat, superinduced from electricity. Many other new apparatus will also be shown, well worthy of attention.

—The Eastman Kodak Co., Rochester, N. Y., Spaces 46 and 47, will make an exhibit of the possibilities of x-ray photography with Eastman Dupli-Tized X-Ray Films under standard conditions of exposure and development with the various types of small machines now on the market. They will also display negatives made with Seed X-Ray Plates. Their whole exhibit will be designed to emphasize the increased effectiveness of diagnosis obtained by the use of standard photographic methods.

—The Engeln Electric Company, Cleveland, Space 54, will show their new Portable Universal Stereoscopic X-Ray Unit with Coolidge Radiator Type Tube, which is a complete Roentgen Plant in one unit, something entirely new and different. The Portable Fluoroscopic Unit and Dental Coolidge Tube X-Ray Unit will also be shown. This apparatus represents a late development in Roentgen Laboratory practice and will prove instructive.

—H. G. Fischer & Co., Chicago, Space 59, will show their latest Interrupterless Transformer X-Ray equipment, No. 2. The many improvements in x-ray generating apparatus during the war will be noticed in this apparatus, for it is their latest model. In addition, the smaller high frequency apparatus will be demonstrated, including the Suit Case Portable Coil. A full and complete line of standard x-ray accessories will also be shown.

—The Hanovia Chemical and Mfg. Co., Newark, at their Booth 98, will offer visitors an opportunity to thoroughly inspect their Quartz-Mercury Arc Lamps, as designed for the use in modern therapeutic practice. Their Alpine Sun Lamp and Kromayer Lamp will be put in actual operation, and competent demonstrators will be on hand to explain in detail their therapeutic use and value.

—The exhibit of the Kelley-Koett Mfg. Co., Covington, Spaces 90 and 91, will consist of an x-ray equipment of a condensed type, designed with especial reference to the requirements of hospitals and clinics, wherein it is desired to handle all branches of x-ray work within a minimum floor space and with the least possible noise and vibration. Their new Bedside Unit will be here shown for the first time, as well as a number of post-war accessory novelties. The government method of localizing foreign bodies will be demonstrated with their portable trochoscope, as used in France.

—The McIntosh Battery & Optical Co., Chicago, Spaces 63 and 64, will exhibit the results of their forty years of experience as manufacturers of electrotherapeutic equipment by displaying the Hogan Silent Roentgen Transformer, which is giving such splendid satisfaction in connection with the new Green & Bauer Self-Rectifying Tube; also Universal modes, Polysine Generators and Bristow Coils, which are being used extensively in reconstruction hospitals throughout the United States and Canada. A visit to their booth will be of educational value.

—Thompson Plaster Co., Leesburg, Va., Spaces 60 and 61, will have the largest display they have ever had of their X-Ray and Electrotherapeutic Apparatus. They will exhibit for first time their new oil immersed transformer F—a high type, high power treatment outfit that can be run continuously also their new Eurisco, an outfit built specially for nose and throat men—a complete equipment in one cabinet; also two styles of X-Ray Interrupterless X-Ray Transformers.

—Victor Electric Corporation, Chicago, Spaces 48, 49, 50, 51, 52. Their exhibit will contain more new apparatus and appliances than were ever shown at any one of their exhibits. In addition, several of the standard Victor equipments with new improvements will be on display.

—The Wappler Electric Company's exhibit, New York, Spaces 23 and 24, will contain their latest Bellevue Model Roentgen-Ray machine with oil-immersed transformer, one hundred step autotransformer and twenty step rheostat control. An important feature of this exhibit will be their Universal Stereoscopic and Fluoroscopic Table, which embodies a new self-balancing plate-shifting device and adjustable screen holder. The NitroKen tube (recently developed by the Wappler Co.) will also be in evidence. Of interest to electrotherapists will be the Telatherm and the Portable Telatherm, designed for U. S. Army hospitals.

UNCLASSIFIED

—The American Medical Association, Chicago, will have an exhibit of A. M. A. publications, and will present for the first time at a convention the new A. M. A. auto emblem which will interest every physician who drives a car. This exhibit in connection with the Superintendent's office, will be located in the Ball Room balcony, at the head of the left stairway.

—Dennison Mfg. Co., Framingham, Mass., Space 130, will make an attractive exhibit showing crepe paper bandages as efficient economical substitutes for the ordinary bandage. They will also have their Surgical Dressing Pads made from a very absorbent paper and other specialties, including tray covers with new embossed hemstitch edge effect, paper sputum pads, towels, napkins and surgical caps.

—S. W. Nourse, Palisade, N. J., Space 85, will have an interesting exhibit of Scientific Photography, illustrating how essential it is to have good photos for records, for publication and teaching; lantern slides from x-ray plate that will show the points of interest; a method of showing x-ray plates of a standard size from all the different sizes of x-ray plates without the risk of loss of the original; photos of patients before and after operations; pathological specimens photographed to metric scales; photomicrographs and other items of timely inetrest to the general practitioner, specialist and laboratory man.

—Waterproof Fabric Company, Chicago, Space 74, will exhibit Sani-Dri, a nonrubber waterproof fabric, and its merits will be demonstrated. Sani-Dri has given universal satisfaction to a large number of users for the past four years. Not only will the exhibit be interesting; it will be of practical value to the visitor. Be sure and get a complimentary surgical dressing.